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Topic: Applesauce question

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Who | When

- Bola**
05-08-2007 09:34 AM ET (US)
- CB**
05-08-2007 09:31 AM ET (US)
- hawk**
05-08-2007 09:31 AM ET (US)
- Shary**
05-08-2007 09:29 AM ET (US)
- b**
05-08-2007 09:24 AM ET (US)
- David Malloy**
05-08-2007 09:21 AM ET (US)
- TK**
05-08-2007 09:15 AM ET (US)
- Wolf**
05-08-2007 09:15 AM ET (US)
- CB**
05-08-2007 09:11 AM ET (US)

Messages ▾

- 314 First: Centimeter IS a metric unit.
All units may be used (the centimeter measure may be a little tricky). But the more corrects are kilogram or gram. You should use a mass measure since the volume (or lenght) will change with the temperature.
- 313 TO confirm my previous statement: I live in Québec and I have a applesauce jar in front of me. Liter is the correct answer.
- 312 Yes, if they want an SI base unit as the answer, kilogram is the only possible answer of those. While you can weigh your apple sauce, that may not be the most natural choice.

The natural choice when measuring a liquid would probably be to measure the volume and measure that in liters (writing it in cubic meters with some optional prefix would look better from an SI point of view, though).
- 311 Isn't SI system based on MKS - Meter(Metre),Kilogram, Second . If so then all derived units must also be based on them. Hence, SI unit for volume is cubic meter.
And yes 1 milliliter = 1 cubic centimeter..but that does not make it a metric unit.
- 310 In tests of this sort it is common to have multiple correct answers among the choices. what they are looking for is the "most correct". In this case it is clearly the measure of volume (liters).
- 309 [/m304](#)
Your statement is more confusing than the question posed to 4th graders. I'm not sure you have ever worked on a meteorological study so you probably can't attest to how precipitation is measured. But since I have participated in one such study, allow me to fill you in on the details. A large cylindrical object is placed outside when it is precipitating. The precipitation is collected in this object and measured, by the inch. Hence, the "amount of rain" that has fallen, or rainfall is measured.

Secondly, since you seem to be so privy to pointing out that the "only metric unit among the choices" is kilogram - then why were you not privy enough to point out that this question was posed to 4th graders? How old were you in 4th grade (9 maybe?) and could you accurately lay out the reasoning as to why a centimeter is not metric, why a liter is not metric, why a gram is not metric and why a kilogram is metric?
- 308 Edited by author 05-08-2007 09:20 AM
Advanced Mathematics (and indeed some physics) uses higher dimensions in order to solve a particular problem. Why cant we use the same principle here... just in reverse.

Imagine a one dimensional universe. Now imagine the apple sauce in that universe. How do you measure the sauce now... in centimetres of course!
- 307 Rob
"I forgot that Yanks bastardise proper spelling.

Litre. Centimetre. Dumb fuckers."

Following your "proper spelling", shouldn't your post read like this?

"I forgot that Yanks bastardise propre spelling.

Litre. Centimetre. Dumb fuckres."

Pretentious, self-righteous Brits.
- 306 I come from Québec and was "raised" and completed my education using the metric system. I confirm that Liter is the correct answer. Why? Because we are measuring a volume of liquid. Millilitre, centilitre would also have been correct answers.

John
05-08-2007 09:08 AM ET (US)

305 As an engineer who deals with various types of liquid processing systems, I would have to suggest both Liters and Kilograms. You then know the volume, the weight, and can therefor calculate the density - all of which I feel would be important metrics to track.

And liters not being a metric unit? I'm not so sure - a millileter is defined as one cubic centimeter, so I'd have to say it IS metric.

Seeing as this is multiple choice I would have to say that "kilograms" is your best bet, since most food products here in the states are labeled with their weight and not their volume.

Shary
05-08-2007 09:02 AM ET (US)

304 "rain is a liquid and is measured by the inch in the United States" ... thats not correct. Amount of Rainfall is measured in inches not amount of rain itself.

I guess the key to the answer is "metric".

Shary
05-08-2007 08:56 AM ET (US)

303 The only metric unit among the choices is Kilogram, and since applesauce can be weighed, it is the most likely answer. Liter is not a metric unit, the metric unit for volume is cubic meter. Gram is also not a metric unit. Centimeter :D is obviously wrong as it is a non-metric unit used to measure length.

David Malloy
05-08-2007 08:55 AM ET (US)

302 If Sara were working at an applesauce factory, I would say that she should measure her output in kilograms since she'll likely be making the sauce in gigantic drums. Nobody asks you to make 1,000,000,000,000,000 grams of applesauce an hour.

If Sara were crushing apples at home, I would say that she should measure her output in grams since she'll likely be making the sauce in a small bowl.

The biggest problem with this question is that deductive reasoning does not apply fully. One could argue that rain is a liquid and is measured by the inch in the United States. Another could argue that if you were to store the applesauce in a container, that you would have to measure that sauce in volume since consistency could vary greatly in the same container. Another could argue the first two points I made and you could not necessarily say either is wrong.

Shame on the 45 year-old white guy who wrote this question while sitting at his cushy leather chair smoking his cherry pipe and sipping on brandy.

Sean
05-08-2007 08:34 AM ET (US)

301 Apple sauce comes in litres? That's a lot of sauce - though - it is in America I guess. I can just imagine aisles of 5 litre bottles of sauce!

LeRoy
05-08-2007 08:26 AM ET (US)

300 Centimetres? It's nonsense to try to specify a quantity of applesauce with a one-dimensional measurement. So it's 20 cm long. Is it 30 cm wide? 1? 10? 10^{224435} ? How high? Nobody made a convincing argument for cm.

Litres? Plausible, though in general practice in the food industry, you will measure something as solid as applesauce by mass rather than by volume. Since the consistency of the sauce may vary from batch to batch or by recipe, volume isn't really an informative measurement.

Grams or kilograms? Absolutely. Either. Measurement of mass tells you something about the applesauce. Assuming that an edible applesauce is mostly apple and a variable but considerably smaller mass of sugar, you can at least use the mass to do things like cross-reference against nutritional charts to determine vitamin, fibre, caloric content. etc.

So the question surely is screwy and wrong.

Eddy
05-08-2007 08:18 AM ET (US)

299 Rain, a liquid (mainly water) is measured using distance (centimetres/millimetres in Europe, presumably inches in US), so centimeters (grrr!) is the right answer to the wrongly asked question.

Rushon
05-08-2007 08:18 AM ET (US)

298 The question is about fluid measurment. Measurement by volume.

miro
05-08-2007 08:14 AM ET (US)

297 All you people who keep saying that all liquids are measured in litres obviously haven't been looking at the labels on the stuff in your fridge lately. Thick liquids are mostly measured in grams or ounces.

A quick search came up with this list of American apple sauces.

http://www.ehow.com/buy_3481_applesauce.html

All measured in ounces. Which is an imperial measurment of weight just like kilograms and grams is a metric measurment of weight.

Anyone care to post a link to apple sauce measured in litres or fluid ounces ?

Andy
05-08-2007 08:03 AM ET (US)

296 The correct answer for the SI system would be: Kilograms, as grams is not an SI unit. This is just by definition the SI unit, not by logic.
<http://physics.nist.gov/cuu/Units/units.html>

As a European if I read metric I might assume they wanted it in the meters equivalent measure i.e. Centimetres.

The American definition of Metric appears to relate to the entire measuring system in Europe, in which case the answer is any of the above as they're all relevant metric units as far as i can tell from

<http://www.mathleague.com/help/metric/metric.htm>

And if that's the case you are relegated to defining what definition fits apple sauce best. Liquid, mass or since it's a mixed substance maybe centimetres. And lets not forget the question of whether if mass, it is most fittingly measured in grams or kilograms...

Might have been a decent question for a philosophy class, heh.

From a physicist perspective the best answer would be kilograms. But this is not the question, Frankly the amount of mass is the most likely candidate, but they've managed to mess this up as well by including 2 different and fully valuable units for mass.

Noodles

05-08-2007 07:59 AM ET (US)

This might have made a decent question to have the students write something about i.e. Argue your case. But as is, it's an absolutely horrid multi choice question.

- 295 Funny stuff. Any of the answers could be used including centimeters if the container is of a known or standardized size. I'm inclined to use grams (and hence kilograms due to my large dependents upon it's hallucinogenic properties when taken in large enough doses!). Without knowing the altitude such as 5 kilometers below the sea or in a hot air balloon (density), the volume may change therefor changing the measurement if given in liters. Liters is a unit of volume and volume depends on pressure. Grams is a unit of mass. The question being asked does not provide enough information to eliminate the possible options being purposed.

This said I feel certain that the "Right" answer is Liters.

The teacher is now happy, I've got the mark, and I now I've even learned a little something about the human condition and my take on how I handle ethics.

LindaMajor

05-08-2007 07:58 AM ET (US)

- 294 One hopes that Mark, the parent, took the opportunity to advise the fourth grader, who's practicing test-taking, that she shouldn't waste her time agonizing over questions that make no sense.

Rich Gautier

05-08-2007 07:58 AM ET (US)

- 293 Railing against the horrible inaccuracies that are piled upon our children by their textbooks is a favorite pasttime of the intelligentsia. That the same inaccuracies have spread to the testing mechanism used to gauge what has been learned by those books is not surprising in the least.

This question is merely evidence of the horrible math/science education that our children are receiving at the hands of an underpaid and underqualified public education system.

joe.

05-08-2007 07:58 AM ET (US)

- 292 KNJ;ZXDLSADPOIZDXVDVLKNSDVPHI ADFHPO[ISZDG;NL'KZDS!!!!!!!!!!

Keele O` Gram

05-08-2007 07:56 AM ET (US)

- 291 Isn't the SI unit of volume the cubic metre? And I want the density of the sauce at ISA (1013.25hPa pressure and 15 Celcius) in kg/cubic metre.

Is applesauce like apple sauce?

VictorianRadical

05-08-2007 07:53 AM ET (US)

- 290 Hate to break it to you Aaron, but liters are metric. Non-metric units of volume are cups, pints, quarts, etc. The word metric in the question is actually unnecessary because they are ALL metric units. Very tricky!

Usually test-writers cover themselves on questions like this by adding, "which unit would be most logical" or something like that. Then when the kids complains they can say, "Well, yes, it is physically possible to weigh homemade applesauce and get a measurement that way, but it is more logical to pour it into a measuring cup."

That guy

05-08-2007 07:46 AM ET (US)

- 289 This is stupid the answer is B) liter because you dont mesure liquids in centimeters or any of the other units listed there.

Aaron

05-08-2007 07:32 AM ET (US)

- 288 Man the litre's people are dumb, they're told it's not Metric and still chose it for an answer. And some say you can measure applesauce in litre's and not centimetre's, were do you think litres come from?

The answers A, C or D. Where does it say you can't have three correct answers, I didn't read that on the question?

Christopher

05-08-2007 07:26 AM ET (US)

- 287 I don't know how to measure something in "metric". The word metric is an adjective unless you are using it to mean "standard of measurement" in a general sense, but that certainly doesn't unambiguously specify the SI system of measurement units. Rewrite that sentence using another adjective like "quickly" or "wise" and see how much sense it makes. As others have pointed out "how much" is also ambiguous.

Sure we talk that way colloquially, but is it really wise to use such poor grammar in standardized test questions?

I did a teaching seminar last year on creating multiple choice exam questions and this one fails spectacularly, in so many ways. As others have pointed out, arguments can be made for all 4 answers, and I feel that at least A-C are quite reasonable and I could not in good conscience call them incorrect if I were marking this test.

On the other hand, let's put a little perspective on this tempest in a teapot. Writing high quality multiple choice questions is more difficult than you think at first. It's easy to spot a bad example, but even good teachers write bad test questions sometimes. You'd think that a standardized test like this one would have better proofing and editing applied to it, but the education system in the US sucks anyway.

Ok, that last bit was a blatant troll (I'm not American) so just let it go...

Rob

05-08-2007 07:26 AM ET (US)

- 286 I forgot that Yanks bastardise proper spelling.

Litre. Centimetre. Dumb fuckers.

alex

05-08-2007 07:16 AM ET (US)

- 285 i'd vote for litre. (im british). lol.

applesauce infers its a liquid...so it should be litres.

nigromontanus

05-08-2007 07:10 AM ET (US)

- 284 [Edited by author 05-08-2007 07:10 AM](#)

Well, apart from this being a test-fu, why should liter be an appropriate measuring unit for something like applesauce, that changes it's volume according to the temperature of it's surrounding?

Since kilogram/gram do not have this flaw of being temperature-dependent, I'd vote for them (or depending on the actual amount of applesauce produced one of them, either grams or kilograms).

Of course, Newton would be perfect, but only for a _very_ chunky applesauce^^

And since it was mentioned some posts below...I must have missed that the british use the metric system...

The BlackAdder
05-08-2007 06:58 AM ET (US)

TK
05-08-2007 06:51 AM ET (US)

Cyrax
05-08-2007 06:36 AM ET (US)

nallam
05-08-2007 06:34 AM ET (US)

Steven
05-08-2007 06:33 AM ET (US)

brian
05-08-2007 06:33 AM ET (US)

Sebastian
05-08-2007 06:33 AM ET (US)

David Smith
05-08-2007 06:31 AM ET (US)

283 The response "grams and kilograms are essentially the same unit" is nonsense. Its like saying yards and miles are essentially the same unit. Do you describe the width of your bedroom in miles?

I have a container of SPC brand applesauce in the cupboard. It is marked 300g

282 It's not unheard of to measure petrol (as used within formula 1 racing) by the kilogram (incidentally used to ensure consistent volumes at varying temperatures). If you were using litres to measure the sauce on a hot day, it would appear that you would have more sauce then if you repeated the experiment on a cool day. Also it might not be appropriate to use litres to measure the volume of the sauce for example, if the sauce was frozen and couldn't easily be measured (again you would be facing the same problem of the volume appearing greater than it should be) it makes sense in order to obtain an accurate measurement of 'how much' sauce was made using kilograms (or subdivisions thereof). This can also be used to draw meaningful comparisons between other foodstuffs or other brands of applesauce. If you had 'chunks' of apples within the sauce a measurement in litres would also have little meaning owing to the fact that some varieties of apple could be more or less dense than others, therefore, it has to be kilos.

(And yes I'm fully aware that the answer the examiner is probably looking for is litres but if faced with this kind of question, I would put kilos as the answer and leave a nice long discourse in the margin outlining the reasons and logic behind the choice, if I had time I might even elaborate a little on how much the question sucked)

281 Edited by author 05-08-2007 06:38 AM

I'm sorry to say that, but it is always be better to check with official sources. Litre/Liter is an "Internationally Recognised non SI Units"

<http://www.npl.co.uk/reference/international.html>

So, the exact answer is "kilogramm".

But the questions is stupid as it is like "do you remember an Archimedes's law formula?" - the formula is simple, but you'll remember it only if you need it.

280 Well, in fact you can buy liquids by kilos. Whenever you buy a liter of water, you are buying a kilogram of water. The only point is that you don't USUALLY use kilograms for liquids. As Frank pointed out, if you know how thick the sauce is (its density), you can easily change from litres to grams. Being scientifically correct, litres gives you the VOLUME of the sauce, how much space it occupies, a measure that depends on atmospheric pressure among others, whereas grams tell the amount of matter there is, which is a much more stable measure. So, why not use grams?

You people that see it so obvious its litres, should learn something before insulting others.

Anyway, I suppose that the intended answer is litres in fact, as is the most usual metric for liquids, but I completely agree that is a missformed question.

Michael, I love your argument for centimetres :)

279 Were I asked to answer the question, I'd choose litre due to there being two units of mass given (even though, in my experience, jars of sauce are measured in grams).

However, if you want to measure the volume of apple sauce produced per area of apple trees, cm is a reasonable answer (volume -- a cubic length divided by area -- a square length gives a length). For comparison, 10 litres per square metre is 1 cm.

278 This isn't the worst question ever, just think about it. First off you know it can't be centimeters because that makes no sense. Then if you thought about it and knew that grams and kilograms both measured the same thing and they both can't be right so it'd have to be liters. Also the answer is clearly liters anyway because that's how measure liquid output. Just like if you asked how much oil you produced you would reply that you made 6 quarts or 2 gallons or so on. The point of the question is to know that liquids are measured in volumes not in mass or length and to know what the metric unit for volume is.

277 From the UK:

If the question is testing pupil's knowledge on The Metric System (and not 'metric' as it states), then it doesn't achieve this given all answers are metric. It seems that the question is 'should a thick sauce be measured by weight or volume?', which is a pointless question in this context.

Arguments that suggest apple sauce (since when did it become one word?) is definitely a liquid are wrong. something like risotto is runnier than apple sauce, but you would never measure it by volume. Any cook knows that you can measure lots of things by weight or volume - they are related. You could get 1 litre of water using scales easily.

So I ask this question: Is butter a liquid or a solid - should you measure by volume or by weight? In cook books, they are used interchangeably - depending on whether it has melted or not, but they are both appropriate measurements.

Back to apple sauce. If it is hot, it will behave much more like a liquid than when it is cold, when it will become much more solid like.

276 The test question is very ambiguous. When I buy milk, I buy it by the gallon. "Litre" is recognized internationally as well:
<http://www.npl.co.uk/reference/international.html>.

"If she uses metric", may imply only official SI units.

I agree with Magnus "Litre is not an SI unit, so if pure SI units are to be used kilograms is the correct answer."

asdfasfd
05-08-2007 06:31 AM ET (US)
MCordona
05-08-2007 06:31 AM ET (US)

who does this?
05-08-2007 06:28 AM ET (US)
Michael
05-08-2007 06:23 AM ET (US)

Biz
05-08-2007 06:17 AM ET (US)

MagnusL
05-08-2007 06:16 AM ET (US)

nick
05-08-2007 06:14 AM ET (US)

Nigel
05-08-2007 06:03 AM ET (US)

Eidur
05-08-2007 05:59 AM ET (US)

Frank Johnsen
05-08-2007 05:58 AM ET (US)

Anonymous
05-08-2007 05:55 AM ET (US)

mint
05-08-2007 05:50 AM ET (US)

Tyler Durden
05-08-2007 05:50 AM ET (US)

Aus
05-08-2007 05:44 AM ET (US)

- @Nigel
I buy my milk by the gallon.
- 275 You are an idiot if you can't solve that. Grams and kilograms are essentially the same unit, so since two answers cannot be correct, they are both wrong. Centimeters is completely erroneous, leaving the one final, correct solution.
- 274 The answer is obviously liters. Not all Americans are as stupid as the guy who posed the question. However, in his defense, the question should have been more specific, since it only asks "how much" applesauce she'd get. Apparently kids today can't think for themselves, so they should have asked, "how much will it weigh" or "what is the volume" so as to indicate what measurement they are looking for. Herein lies the problem. I think in a situation like this, they're looking for liters. Why? Because it's a liquid measurement. They're not asking for different ways to rationalize calculating the volume in centimeters. In the real world, if your boss asks you how much gas you want to be reimbursed for, if you give him the volume in centimeters, you're not going to get reimbursed. You won't necessarily be wrong, but at the same time your boss is going to think you're wasting his time and money for doing massive calculations when he asked you a simple question. The question was obviously partially designed to test common sense and the person who posed the question is very ill equipped. And yes, he should have asked scientists, not artists, as their reasoning for their answers is fundamentally flawed and are based on a philosophical approach to answering the question, rather than a mathematical process.
- 273 This is clearly a bogus question. But I have a better one for you: Who still makes applesauce at home?
- 272 There's no absolutely correct answer. Units are used to express a measurement of a particular characteristic of something. The particular units to use depend on what characteristic you are measuring. This in turn should depend on what you want to do with the item/substance. For example, if you want to know if you'll be able to lift all the apple sauce at once, you should measure its weight - probably in kg given that we're talking about a whole season's (fall) worth of apple sauce. If you want to know how much container space you'll need for the apple sauce, then litres (or kilolitres if the sauce maker has been very productive) are appropriate. If you want to measure how deep it is after you've dumped it all on the kitchen floor, then centimetres are appropriate.
- 271 Definitely a stupid question. No doubt the answer is supposed to be liters, but the question is not specific enough, as volume can change as mass stays the same, in which case measuring in grams or kilograms would give a sound answer. Also, grams and kilograms is not a measure of weight (though it often is treated as such), which is a force, and as such would be measured in Newtons.
- 270 The answer is obviously kilograms. Litre is not an SI unit, so if pure SI units are to be used kilograms is the correct answer.
- 269 It's a lousy question indeed but ...
wtf qualifies a screenwriter, a director and a magazine editor to pronounce? Don't you know any educators of any kind?
- 268 OK all you smartasses, if liquids are always measured in litres please explain why pasta sauce (quite clearly a liquid) throughout Europe is ALWAYS sold by weight?
- 267 "I've shown this question to a movie director, a screenwriter, and a magazine editor, and they think its a lousy question, too. I've even heard a decent argument for d)."
- That's your problem right there, you should ask people who are likely to know something about the metric system! :)
- I think the answer is liters, applesauce is a liquid and we want to know how much there is of it, not how much it weighs.
- 266 [Edited by author 05-08-2007 05:58 AM](#)
Here in Norway we have used the metric system for ages. Apple sauce is a liquid, and as such can be measured as that (liter). It is also food, and may be measured in weight (gram, kilogram).
- In fact, it would matter how thick the apple sauce is how to best measure it. For instance we measure jam and honey by weight.
- I agree, this was a stupid question.
- Frank
- 265 You retard its obviously Litres
- 264 I don't understand the fuss: apple sauce is a liquid, liquids are measured in liter, centiliter, and so on...
There is complicated shit in life already, why do people also have to complicate what is not?
- 263 "I hope all people aren't that thick"
- sweet pun
- 262 What?
- How is it the worst question ever?
- The only correct answer would be LITRE. You can't measure liquid in Kilograms. Like Aaron said: You can't buy liquid by the kilo, gram or centimetre.

Cristina
05-08-2007 05:42 AM ET (US)

Scooby
05-08-2007 05:32 AM ET (US)

Aaron
05-08-2007 05:31 AM ET (US)

Mato
05-08-2007 05:28 AM ET (US)

Andrew
05-08-2007 05:13 AM ET (US)

Steven
05-08-2007 05:06 AM ET (US)

Steven
05-08-2007 05:05 AM ET (US)

Steven
05-08-2007 05:05 AM ET (US)

Dongle
05-08-2007 05:04 AM ET (US)

Steven
05-08-2007 05:02 AM ET (US)

Simon
05-08-2007 05:01 AM ET (US)

james
05-08-2007 04:59 AM ET (US)

airwhale
05-08-2007 04:47 AM ET (US)

miro
05-08-2007 04:43 AM ET (US)

I hope all people aren't that thick.

Hope all diggers aren't stupid.

261 in metric, u measure weight by kilograms (or grams ; 1000 grams = 1 kg)and u measure volume by liters. so the question is a bit confusing cause they didn't ask for the specific way to measure...so i think given the applesauce question, depending in what they bottled it can be kg or l

260 Worst question ever!

259 I don't really understand how weight would work for measurement... That's like arguing that milk should be sold by the kilogram.

Isn't the answer simple..?

258 Liter!!!
You don't now the answer, your frend dind't know the answer?
Education in US is pretty low. God help us.

257 assuming the apple sauce is in liquid form it should be in litres (no, that's the correct spelling) and if there's less than a litre the measurement should be in millilitres.

Grams may be acceptable but is inappropriate because the measurement is (I assume) of volume not weight.

All in all, it's a terrible question but at least it's evidence that the US is trying to take on the metric system.

256 How much have you got? 60 seconds?

See it "works" but not a valid answer...

255 or cubic centimetres....

it is metre....

254 My mistake:
I just rang my local supermarket:

375 ml jar SPC* Smooth Apple Sauce

Again it could be in picolitres.....
GigaLitres.....

253 I'm down with measuring it in centimeters squared.

252 Here it is in grams/kilograms, however litres is also correct.
There is no case for D, full stop.

251 Any of A though C are very valid answers. D is less easy but could still be used. Use a desert spoon to serve it. As the sauce slides off the side of the spoon, move the spoon a little so that the sauce forms something similar to a berm on the plate. Measure the length of that berm. Repeat with all the sauce made and you have a length in centimetres. Very contrived but doable none the less.

I would be grateful if you would arrange sterilisation of the question setter, they should **NOT** be in the gene pool!

250 The "fourth grader" part is the only reason this question may be lousy. Why?

A and C are the same answer, except for a few orders of magnitude. Since it's a format where only one answer can be deemed correct, you can logically exclude both A and C, since they're both equally correct (almost regardless of the question).

Therefore, B is right.

Yes, this is a logic jump more so than answering the question, and I'm personally much more a fan of measuring mass rather than volume, but in the context of a standardized test, there's clearly a right answer here.

249 I agree that this is a question with multiple correct answers. The only measure I definitely wouldn't use is "centimeteres". The most common measure will probably be the litre, but using any of the weights as a measure would also be acceptable - at least where I live (which is in Sweden).

248 Here in Croatia we use the metric system.

I don't have any apple sauce but in my fridge there is tomato sauce, green curry sauce, and paprika sauce (ajvar). All thick liquids like apple sauce, all measured in grams. You could measure it in litres if you wanted, and if you had more than 1000 grams you could use kgs

I would say a, b, and c are correct. It's unlikely you would use cm to measure sauce.

From what I've just noticed in my fridge, thin liquids like juice, milk and beer are measured in mls or ltrs and thicker liquids like sauces and yoghurt are measured in grams.

Definitely a stupid question, but from what I've heard of the U.S. education system it doesn't really surprise me.

A chicken passeth by
05-08-2007 04:39 AM ET (US)

Rob from Downunda
05-08-2007 04:27 AM ET (US)

Chemist
05-08-2007 04:27 AM ET (US)

Me
05-08-2007 04:24 AM ET (US)

rick
05-08-2007 04:23 AM ET (US)

Physicist
05-08-2007 04:21 AM ET (US)

Khyber
05-08-2007 04:20 AM ET (US)

Jrod
05-08-2007 04:17 AM ET (US)

English Teacher
05-08-2007 04:16 AM ET (US)

notrelevant
05-08-2007 04:14 AM ET (US)

davidscott
05-08-2007 04:09 AM ET (US)

zydeko
05-08-2007 03:51 AM ET (US)

JRslim
05-08-2007 03:46 AM ET (US)

tony
05-08-2007 03:41 AM ET (US)

Jose
05-08-2007 03:38 AM ET (US)

tv
05-08-2007 03:32 AM ET (US)

247 I'm going to disregard all the attempts at math/science/whatnot, and answer like a child would.

Applesauce is a liquid. It's not water, and although it doesn't flow like water, it's still a liquid. Thus, Litre should be used.

I'm sorry, but considering I've never seen applesauce (is there even the powdered variety?) sold in the grocery's in anything other than denominations of litre, I don't see how there can be more than 1 answer.

I do agree that the question needs to be rephrased.

246 yeah i agree learn to spell you dumb yanks....hahahahaha

245 This is an awful question, it depends on how viscous the apple sauce is and how much you make. Yes you could argue that there are base units of the metric system but the separation of atoms isn't measured in meters because it's ridiculous to, Atomic units are no less metric than the base units.

244 I think most people agree that the best answer is litre for measuring volume of a liquid, although kg or g would be OK if you wanted to measure mass.

But you yanks really need to learn to spell litre and metre correctly.

243 I've noticed that in the supermarket (in the metric country I live in) it's not unusual for competing products to use different units (grams vs liters) on slightly different sized packaging, making it difficult to compare prices. I've always thought it is done on purpose.

Anyway, not only can all answers be correct, a, b and c are actually used in the real world. Lousy question indeed.

242 All four answers are metric. It's dumb question for sure.

241 The answer is litres. Applesauce is a liquid, and as such, you measure by volume of the liquid, which makes it Litres. If you had to think that hard and ask a bunch of other people that question, I think it's time for remedial classes for you. Anyone that's taken any cooking lesson would know it to be litres.

240 Edited by author 05-08-2007 04:19 AM
tv, you're correct. I should've said cubic meters. I referenced an incorrect source (<http://www.mathleague.com/help/metric/metric.htm>) on that one. My bad...

239 Has anybody pointed out that the grammar of the question is incorrect?

You can not use "metric" ,but you can use the metric system.

But hey, I guess that the bad who made the wrong was only thinking that in adjectives can make a cool.

238 It is an ambiguous question where much of the correct answer depends upon the method of storage. If the applesauce is preserved in canning jars they would be measured in Litres. If however it was put into freezer bags and frozen it could be measured in Kilograms (or even grams if the quantity were low enough).

I, however, prefer to believe that kindly "Aunt Sara" makes just one special batch of applesauce yearly and she always uses a special cooking pot. She measures how much she gets each year by sticking in a ruler and measuring it in centimetres.

237 Edited by author 05-08-2007 04:10 AM
i would say that it depends on what she needs to know for. she could get paid by the liter but if she wants to see how much is left from her original mass of apples then prolly kg. who knows. living in california this just reminds me of too many standardized tests that weren't supposed to be counted but still determined if you were stupid. of course i never was lol jk.

236 Litres I'd say. In Sweden we even buy strawberries by the litre for Pete's sake!

235 Brutusbuck, who posted earlier, checked his apple sauce to see how it was measured... His was measured by weight (in grams/ounces) but my PC cinnamon applesauce is measured in mL (or milliliters). So what was the right answer? You have to tell us!

234 It depends how she wants to measure it...volume or mass? if volume in the S.I. it would be cube meters, if mass, kilograms, as there is no m³ the answer is Kg...

The question is correct and with only 1 possible correct answer because the fundamental units are meters, kilograms, seconds...the rest of units are derived from them...the question is not lousy, the question is just a fuc*ed up question for a forth grader... Who ever wrote it is an ass you just can't make kids confused...things have to come at a time and a 4th grader doesn't have to know this...they have to know basics and keep on adding!

233 yes, it's a bad question, but if I was taking the test I would have to go for gram on the basis that both a kilogram and a litre are a hell of a lot of apple sauce to be making!

For those people saying it's kg cause that's the SI unit, the question simply says "using the metric system" and gram, kg and litre are all valid metric units.

232 Jrod: "standard measure of volume in the metric system you would use liters" is not correct. Volume in SI system is measured by cubic meter.

Anne

05-08-2007 03:31 AM ET (US)

231 Living in a "metric country" I'd say it would be either liter or grams, although kilograms would work as well.

I could look up what it says on apple sauce jars here.

It would also depend on how much applesauce she made. Up to 1000 grams it is common (at least here) to measure in grams, so rather than 0.5 kilograms you would say 500 grams.

On the one hand you could argue that this question is good because students would have to be creative and explain their answers, thus allowing them to answer in several possible ways if they can give good reasons as to why they chose the answer they chose. If this is a standard test though and only one answer is accepted as the right one, this is a bad question and obviously confusing.

Heck, if even I, who has always measured in metric can't say for sure what it is, how should a fourth-grader know?

Monty

05-08-2007 03:26 AM ET (US)

230 It has to be kilogram. I mean, they're asking how much Sarah made over the Fall. 3 months. I googled for Applesauce recipes, and the first one I found called for 4 pounds of apples. Now assuming that we only make one batch a night, that's around 162 kg of applesauce over the course of an entire fall. The recipe didn't call for cups of apples, in which case liters would be an obvious choice, but pounds.

Come on now - this one is obvious.

Jrod

05-08-2007 03:19 AM ET (US)

229 [Edited by author 05-08-2007 03:24 AM](#)

If you wanted to use the standard measure for mass in the metric system, you would use kilograms. If you wanted to use the standard measure of volume in the metric system you would use liters. Heck, I could even argue using centimeters by relating it to pressure (millimeters of mercury -mmHg), instead use centimeters of applesauce. All you would have to know is the density of the applesauce. She could have done that by knowing the effect of atmospheric pressure on a column of applesauce and constructing an open-ended monometer... If they were testing for creativity, that would be the way to go. I'll be done with my bachelor's degree in chemical engineering soon and can't honestly tell you which answer is correct. This question is too vague. Because mass and volume are related through density, and the applesauce density is constant, one could use mass or volume to answer this question. I guess it would depend on the amount of applesauce made, but the question doesn't give that information... Oh well, back to studying...

Mike

05-08-2007 03:14 AM ET (US)

228 [Edited by author 05-08-2007 03:15 AM](#)

The question wants you to answer, "What is the correct SI (Metric) unit to measure volume?" The answer is liter, but since (1) they used a food which doesn't happen to be a liquid and (2) food is measured in both grams and liters, the question is ambiguous you could actually have 3 correct answers:

She made a lot of applesauce so you measure it in Kg,
You are at the store and see a jar of applesauce marked in ounces and grams,
You are filling 1 liter containers for your applesauce.

merrik

05-08-2007 03:11 AM ET (US)

227 I think common sense would suggest liters. Applesauce seems much more like a fluid than a solid to me, and most fluids get measured by liter. Applesauce is a mixture of things though, and so depending upon the ingredients used, the weight of two different applesauce types could vary significantly by volume. Volume measurement seems a much clearer way to indicate how much applesauce there actually is. Can it fill a teaspoon? A tablespoon? A fish tank?

Measuring applesauce in Kg seems like it would be like measuring water or spaghetti sauce in pounds, and one has to guess at how much applesauce that weight actually represents.

standardized test master

05-08-2007 03:09 AM ET (US)

226 [Edited by author 05-08-2007 03:10 AM](#)

The correct answer is obviously liter. Any good standardized test takers know you eliminate similar answer choices. Gram and Kilogram can't both be right so neither of them is right. Of course cm is wrong. So you're left with liter.

doc.-

05-08-2007 03:07 AM ET (US)

225 Dear All,

The base units of the metric system are : meter, kilogram, second, ampere.
There are other "approved units" of the same system and one of them is liter (or litre).
So the answer to the question would be Kilogram, if one sticks strictly to the metrics system base units.

Chris Taylor

05-08-2007 03:00 AM ET (US)

224 Here is how I can prove the answer is kg

replace APPLESAUCE with anything else you want. WHICH answer is correct NO MATTER what you replace applesauce with (MATERIAL things people) its not important that its applesauce but IT IS important thats is a physical substance.

Sara wants to measure how much STUFF she made this fall. If she uses metric, which unit should she use?

A) gram B) liter C) kilogram D) centimeter

Whats the answer? IE what is the only answer that is correct no matter what I put in place for "stuff"

craig

05-08-2007 03:00 AM ET (US)

223 answer is grams. you look at any peanut butter or jam jar and the measurements are made in ounces or grams. since applesauce is not a liquid, and not a measurement of distance, gram is the next best. kilogram is just too much.

Pat Garard

05-08-2007 02:59 AM ET (US)

222 G'Day from OZ! Just a note that if measuring in grams or kilograms you are measuring MASS not weight.
The unit of weight (Force) is the newton.

Riaan

05-08-2007 02:43 AM ET (US)

Zuggy

05-08-2007 02:40 AM ET (US)

brisk

05-08-2007 02:39 AM ET (US)

Jaymes

05-08-2007 02:38 AM ET (US)

Doug Brenner

05-08-2007 02:32 AM ET (US)

Michael

05-08-2007 02:30 AM ET (US)

thecrux

05-08-2007 02:29 AM ET (US)

Chad

05-08-2007 02:25 AM ET (US)

Adam Cliff

05-08-2007 02:21 AM ET (US)

NZ

05-08-2007 02:19 AM ET (US)

tv

05-08-2007 02:16 AM ET (US)

brutusback

05-08-2007 02:11 AM ET (US)

Jeff

05-08-2007 02:06 AM ET (US)

221 Hi All,

It's Liter(L), all sources here are measured in ml.
 The litre or liter (see spelling differences) is a unit of volume. There are two official symbols, namely the Latin letter L both in lower and upper case: l and L. The majuscule has been introduced in many english-speaking countries to avoid confusions with the numeral 1. The litre appears in several versions of the metric system; although not an SI unit, it is accepted for use with the SI. The international unit of volume is the cubic metre (m³). One litre is denoted as 1 dm³.

220 It can be any of them. You can measure the applesauce by weight using grams or kilograms, you can measure the liquid volume in liters or you can measure it in cubic centimeters so D is only semi-right

219 well, you know the BEST way to measure how much applesauce you made is by how many apples you used. which sounds more like something a normal person would say:
 "how much applesauce did you make this fall?"
 a) i made 200 grams of applesauce. "huh?"
 b) i made .5 liters of applesauce. "huh?"
 c) i made .2 kilograms of applesauce. "huh?"
 d) i made 20 centimeters of applesauce. "huh?"
 e) i made 10 apples of applesauce. "ohhh. well why didnt you just say that?"

218 Yes lets test Americans over the metric system.... Half the people I speak to in the states think Canadians don't celebrate Christmas.

217 It's a good test question, since the education system is all about squelching creativity. Anything which punishes the student for thinking or doing anything other than memorizing the official answer, is desirable since it helps to achieve proper uniformity of the education system's output commodity - students.

216 I live in a metric country... Weight is in Kilograms, sub-unit Grams. Being a liquid it should be measured in litres sub-measure Millilitres. If I where to go down to the store the measure would be (eg.) 200ml, measures above a litre are expressed as (eg.) 20l. Centimetres, millimetres are units of length.

Would you measure a liquid in yards? D is the worst possible answer.

BTW: it is spelt Litre, Millilitre, kilometre, centimetre, millimetre, kilogram and gram. The most stupid thing is not the question, it is the spelling!

215 All depends on whether Applesauce is liquid or solid doesn't it? If liquid then the convention is volume, if solid the convention is mass. So which is it people? A liquid or a solid.

214 SKI - "why are you testing on the metric system? Last time I checked this is the USA and we use the English system"

Answer - The metric system is a superior system to the old English system and all the coolest nations have taken it up :-)

213 It's B, because that is the only volume measurement.

212 All this talk about Applesauce.... Makes me hungry.

.....I don't actually think this is to difficult, I think everyone is over thinking it. If I were a stupid kid (I refer to all kids as stupid) I would look and read the parts where emphasizes BIG and then go for for KG.... Nuff said

211 I said earlier, like Physicist, that ONLY SI BASIC UNIT IS kg. That's the answer.

210 Centimeter is a unit of length and obviously wrong. The only question is whether applesauce is measured by liquid volume (liter) or weight (gram or kilogram). After a trip to my refrigerator I can safely say that my applesauce is measured by weight (1 lb. 9 oz. or 709 grams). Therefore the answer would either be gram or kilogram. Since a gram would only be less than a spoonful, the right answer would be kilogram (1 kilogram = 2.2 lb.) I think this is not a bad question but a little too advanced for the fourth grade. Having two essentially correct answers and having to pick the more correct answer by reasoning makes it a good question for the appropriate level. If, on the other hand applesauce is sold by other companies in liquid units then the question is bad and shame on the evil applesauce industry!

209 If you measure in cm, then the measurement itself doesn't convey all necessary information (in order to interpret the measurement, you also need to know the surface area of the container you are measuring the cm in). So d can be discarded. So the next question is whether volume or mass is a better measurement. Volume is more likely to fluctuate with time than mass (it's applesauce. It has air bubbles, compressible parts of apples, etc.), so mass would be a more consistent measurement. So that eliminates b.
 For two reasons, kg would be a better unit of mass to choose than g. The first is that it is standard notation, so if you need to compute something (such as truck bed stress for shipping it, or something related), kg would be more convenient. The second is that this implies a season-long production line, from which we can presume that a reasonably large amount of applesauce was made. The odds of being able to accurately measure the mass to within 1 g are low; the odds of being able to measure to within 1 kg are much better.
 So, the best answer is c. Kilograms.

SKI

05-08-2007 02:05 AM ET (US)

NitinP

05-08-2007 01:55 AM ET (US)

NitinP

05-08-2007 01:52 AM ET (US)

208 The answer is Kilogram; however, why are you testing on the metric system? Last time I checked this is the USA and we use the English system. If we keep doing this our gas prices will be measure in litres and not gallons.

207 although i disagree with your logic entirely and I think the answer is Kilograms for the practical measurement of large quantities of applesauce.

206 umm gamer you = retarded.

"If two answers are the same (grams and kilograms both representing weight), neither can be correct"

"What are we left with? Length and WEIGHT?!"

if two represent weight get rid of weight. You're left with length and volume.

Idiot.

Jonathan Jobe

05-08-2007 01:52 AM ET (US)

205 @David Polston

You are mostly correct, but something that is 1 liter (a measurement of volume) is not necessarily 1 kilogram (a measurement of mass). This is due to different substances having different densities, which is generally measured as kilograms per cubic meter. We cannot assume that water and applesauce have the same densities.

As for the question, we can safely eliminate choice d because it is not a measurement of mass or volume (it would be difficult to measure applesauce in length). Since the exam provides two units of mass as possible answers, it is also safe to eliminate those choices, leaving the volume measurement. This is still a horrible test question, since measuring the quantity of applesauce made by mass would be a valid way to measure it.

Stefan

05-08-2007 01:51 AM ET (US)

204 It's liter - why is everyone so work up about this? Ask the question in the US's quaint pre-decimal system:

- A) ounces
- B) quarts
- C) pounds
- D) inches

The question that really needs to be answered here is if one is to measure applesauce in units of weight, volume or length. I would go for volume and I am sticking to it.

PS: If the 'poor little girl' would have gotten the answer right dad would have been proud and that's that - but no.... Geez!

Chris Taylor

05-08-2007 01:51 AM ET (US)

203 The correct answer to me is KG and here is why

- 1-First they give that you want to measure something applesauce
- 2-Second they give a relative quantity (massive) ie a production run.
- 3-Third they give a condition to the answer. SHOULD
- 4-Common sense

1 eliminates centimeters. No you can not use variations of a unit since they already GIVE a variation (g and kg) and since they want ONE answer variations are not allowed so centimeters is gone)

2 and 3 work hand in hand. SHOULD means that more than one answers can be correct (liter g and kg are all correct) but that you SHOULD pick one over the other for some reason

g and kg give us this reason. Its common knowledge that you use a small measure for small quantities and a large measure for large quantities. (this is 4 the common sense part) You would not measure your cross country trip in inches would you even though its a technically correct measure?

THIS right here eliminates liters at the same time. there is no counterpart for liters. liters is a singular correct answer making it illogical to ask a SHOULD question if the only answer is liters (if its liters its not a should)

Believe it or not trick question are not to confuse you they are to test your practical knowledge. IE its not making a choice its making an intelligent choice.

Back to 3 and 4 ok how do we choose g or kg both are correct (meats are should scenario in having 2 possible answers)

we this is where 2 and 4 come in. They give us a hint as to the size. A seasons Production run. this tells me very LARGE quantities. 4 says you use kg for large quantities and g for small quantities.

Production run is large quantity so the answer is you SHOULD use kilograms.

M

05-08-2007 01:51 AM ET (US)

202 Kilogram, gram, and liter are all metric units so the question is ambiguous at best. Although, I suspect the answer they are looking for is liter since it would probably be the easies quantity to measure if she really had just made apple sauce.

physicist

05-08-2007 01:50 AM ET (US)

201 The answer is kilogram.

Why?

Grams, liters, and centimeters are NOT directly SI units. A liter is a decimeter cubed. Kilograms here is the ONLY SI base unit.

A decent argument could be made for liters, because we are so used to it. But in SI, the base unit for volume is m³.

I think the problem of this question is that the teacher wanted them to use SI base units, but did not specify. All the other units are derived SI units.

Grams would be the correct answer for the question in "cgs" units (centimeter, grams, seconds). Centimeters would fall out in that question because it's not a volume unit, although you can use centimeters to measure volume if you know the base of a measurement cylinder, but you would still convert the answer back.

Not a good question, I agree, because it is not clear.

Gamer_2k4

05-08-2007 01:48 AM ET (US)

200 I'm sorry if a fourth grade question was too hard for you. All it takes are some problem solving skills. Right away, there appears to be three ways to measure the applesauce: length, volume, and weight. Remember, if two answers are the same (grams and kilograms both representing weight), neither can be correct. What are we left with? Length and weight. When was the last time you measured applesauce by length? Well, that rules out centimeters. Would you look at that! Only one answer left! And all it took was common sense!

pseud0nym

05-08-2007 01:40 AM ET (US)

199 [Edited by author 05-08-2007 01:43 AM](#)
Okay,

1 gram == mass of one cubic centimetre of water at sea level, so basically all answers to that question are correct, with D) being the least correct. In Canada it would be measured in BOTH grams (kilograms is 1000 grams) and Litres (1 litre being the volume of one decimetre cubed of water at sea level) on the label.

REALLY bad question. Really really bad.

Patrick

05-08-2007 01:39 AM ET (US)

198 Personally I think it would be litre - the "best" answer for me out of the possible choices would be the unit that can be represented in the most easily-understood manner (something is more easily read as 250 grams than .25kg). I wouldn't think measuring the length of the applesauce would be very helpful, outside of determining volume, and I think the creation of applesauce involves larger quantities than milligrams. So, having narrowed it down between kilograms and liters, I would use this logic:
Applesauce is more dense than water, so one liter of applesauce contains more applesauce than one kilo of applesauce. Lower numbers = more easily read and understood.
I would say liters is the most appropriate answer.

earththing

05-08-2007 01:35 AM ET (US)

197 The liter is the only measurement there which measures volume, applesauce is a liquid therefore should be measured by volume. So liter should be the correct answer.

zsa

05-08-2007 01:30 AM ET (US)

196 Any country which uses the metric system would know it's the litre. If they're expecting kids who are not familiar with this system to know the answer, then yeah, it's a dumb question.

tv

05-08-2007 01:25 AM ET (US)

195 Could it be that they want the basic SI unit?
Then it is kilogram because it is basic unit, others are not.

David Polston

05-08-2007 01:23 AM ET (US)

194 So here's how the metric system works:

2 french guys were tired of everybody making up their own measurements. So they decided to come up with ONE measurement for everything. I mean EVERYTHING. Volume, area, length, displacement, weight....EVERYTHING. And they were going to call it the Meter...since it would be one measurement for everything.

They set about measuring the earth. They got it slightly wrong, because they didn't realize the earth wasn't a perfect sphere...but still, They decided that 1/4 of the earth was a certain length...and that 1/10,000 of that would be the meter (and it is).

Then they decided that 1/100 of that (a centi-meter) would be a good unit to work from on a day to day basis. They called a cube 1 centimeter in every direction a millilitre. That is to day, 1/1000 of a litre (liter). I have no clue where "liter" comes from. Sound a lot like "meter", though.

Then they decided that 1 milliliter of water would be a good place to start for measuring force (i.e. weight, for instance.) And so 1 milliliter of water weighs 1 gram.

Therefore (and this is the whole POINT of the metric system) it's possible to measure an amount of something in ANY unit of the metric system. If it's 1 liter, then it's 1 kilogram, then it's 1,000 cubic centimeters. It's all the same thing.

-D

matt

05-08-2007 01:17 AM ET (US)

193 It isn't centimeters, because you're not measuring distance. liters apply to volume, the other two apply to weight - this is exactly the kind of question that would prompt me to write in my own answer in tests.

Ha ha ha, and they would always say, "He really is smart, although he doesn't get very good grades..."

Molly

05-08-2007 01:14 AM ET (US)

answer : e.) 'standardized tests are a waste of my time.'

192 The purpose of this kind of question is not to find the "right" answer, but to test critical thinking. In fact, there is no "right" answer (how many questions in life have 1 right answer anyway?) but there is at least one answer that is "best."

Centimeters is not the best answer. It may be whimsical, and that is charming, but humankind did not invent systems of measurement so that someone can act mentally superior by arguing that a measurement of length is valid for calculating the amount of a semi-liquid substance.

Of the other three, the best answer, oddly, seems to depend on 1. whether applesauce is a liquid or solid and 2. How much of the stuff whats-her-face made. Applesauce was a bad choice of substances, I think, the test writers should have picked something that is clearly liquid or clearly solid.

Anyway, since grams and kilograms are both there, this seems like a hint, that perhaps neither is the best answer. Why are both shown? To me, it seems that grams is too small of a measurement for applesauce (if you can only manage to make a few grams of applesauce, just give up). On the other hand, kilograms seems too big. Unless Sarah (is that whats-her-face's name?) is a food corporation, she probably doesn't need to measure her product in kilograms.

To me, liters is the best answer. It seems reasonable to make applesauce by the liter, and to me, applesauce is a liquid rather than a solid. I don't know how you make applesauce, but if it is solid enough to measure in grams, you may have made a cobbler by mistake, you should check on that.

Roy Huggins

05-08-2007 01:03 AM ET (US)

ty

05-08-2007 12:56 AM ET (US)

Kyle Goetz

05-08-2007 12:51 AM ET (US)

191 It's also worth noting that this is a very culturally biased question. Some people on here seem to think that applesauce is a solid, whereas I insist up and down that it is a liquid. That pretty much kills any idea of a "best answer."

190 What the hell does this have to do with maths anyway?

189 Using the Rules of Standardized Test Taking (TM), the answer is kilograms. One of the Rules of Standardized Test Taking that I discovered over the years of taking them (a standardized test every year from first grade until high school graduation basically -- my year was a national guinea pig group) is that, when presented with four options, if two are similar in kind but not quantity, and the other two choices are different in kind, the answer is one of the two similar in kind. In this case, we have one length, one volume, and two weight. Thus, go with the two weight. Then it becomes a matter of which is correct, and it is kg because who measures an entire season's worth of food in grams?

Here's some other defenses of "kg":

1)Applesauce is a solid, not a liquid, so it's "better" in the quiz's eyes to go with a solid measurement.

2)Why did the quiz include both g and kg? Simple: because the purpose of this specific question is to test whether you can reason why there would be kg rather than g. I remember taking these tests a few years ago, and this is why the Stand. Test Taking rule I stated above is true: the test has two different choices, and two similar in kind but different in quality is to see if you can tell which of the two similar in kind is the better answer through "logical reasoning."

It's a really, really dumb question, though, I agree.

And Mark, you should let us know what the correct answer turns out to be.

nex

05-08-2007 12:43 AM ET (US)

188 No, there aren't several possible correct answers. The question is, "which unit should she use?", so you're supposed to give the best possible advice to Sara, and no two answers are so similar that both could be equally practical. Rather, the trouble with the question is that it doesn't state _what for_ Sara needs the measurement. If she was still in the process of making the sauce and sent you to the store to buy jars, you'd ask her for litres. If she was figuring out how much it would cost to ship it to her auntie in a packet, she'd need to know cubic metres and kilograms. If she wanted to use it as an ingredient for a recipe and needed to know how much servings it would make, it would depend on the recipe, but probably it would state the amount in litres, as it's impractical to portion applesauce using a scale.

But the question doesn't say a word on what the measurement is for.

Let's try elimination:

You can't possibly state the amount in centimetres. If you're crazy enough, you could make a decent argument for centimetres, but then the same is true of moles, watts, and furlongs per fortnight.

The presence of the kilogram option rules out the gram option. For a batch "made this fall" (as opposed to an amount "eaten for dessert"), the larger order of magnitude is more appropriate, and even if you want to avoid small fractional amounts, there's no practical need for that much precision. (E.g. if you use a measuring jug to portion out 1/3 litre, a few grams will stay in the jug and end up going down the drain.)

But now there are still two answers left, and they're equally plausible. The question didn't give us enough information. So, if this isn't multiple choice, it's a nonsense question and there is no correct answer.

Joseph B.

05-08-2007 12:30 AM ET (US)

187 Multiple correct answers with one better than the others.... it's a standard form of question. If it were three obviously incorrect answers, non-metric units, for example, it would be too easy. Four viable choices with one better than the other three is a more accurate representation of a real life decision which, more often than not, asks us not to find the correct, but the best option. I'm not sure I see the problem. If I caught my son or daughter measuring the length of the applesauce they made, unless they were gathering dimensions to estimate the volume they had produced, I'd ban them from the kitchen. Seriously folks, is this that baffling or confusing?

Mike

05-08-2007 12:20 AM ET (US)

186 I live in Canada, where we use metric all the time. While it is possible, I suppose, to measure applesauce by weight, which kilograms and grams are units of, it would make more sense to measure it by volume, which Litres are a unit of.

I think this question is getting a bad rap. Seems to me the only assumption you have to make is that you'd want to measure applesauce by volume, not distance or weight.

That's my two bits.

Pwall

05-07-2007 11:53 PM ET (US)

185 since kilogram and gram are the same thing ethier could be write, so therefore because CM is obviosly not the right answer it is litre process of elimination

Preston

05-07-2007 11:52 PM ET (US)

184 Edited by author 05-07-2007 11:53 PM

Pshaw, I agree with you about the inability to discuss posts easily with other boingboing readers, on the main site. Even if there was a little 'discuss' link tagged below each one that brought you to a separate forum, it would be fine. I would agree with anyone that might say this thread is an inappropriate place to talk about such matters, but unfortunately there's no proper place to do so and therefore my hand is forced.

Anyway, as far as the test question: the answers aren't misleading- any one of them COULD be valid, sure, but you have to remember that it's generally understood that applesauce is a liquid, and therefore should be measure by a liquid unit. It's the wording of the question that falls short of clarity. The word metric shouldn't even be there since every unit is metric. Not very toner-economic.

This all could have been avoided if Sara just had the patience to make apple JUICE instead.

joe

05-07-2007 11:47 PM ET (US)

183 why doesn't boingboing allow coments? i thought you guys were all about Web Power and Community?

kyle

05-07-2007 11:06 PM ET (US)

182 It is all relative, all will work, the last one could be used if she was to use the volumetric equivalent. that is a very stupid and miss leading question, this is why america is falling behind and down the tubes.

Andrew

05-07-2007 10:33 PM ET (US)

181 The correct answer is obviously b) litre because:

- Whether grams or kilograms would be better depends on the amount of applesauce, which isn't given;
- centimeters would depend on the shape of the applesauce, independently of its volume or mass (forget moles, you're a 4th grader, you're not allowed to know about them).

when I say "correct" above I mean the answer that matches the answer key, of course. That's all you want when you're taking a test, be it the teacher's pop quiz or the SAT or A-levels or the bar or whatever -- remember that, kids! You must cleanse your mind of the notion that any other definition of "correct" exists if you want to do your best on "standardized" tests. Whenever you're not taking a test, please feel free to use a better definition of "correctness."

Russell

05-07-2007 10:28 PM ET (US)

180 One thing I learned very well in school was how to pass tests, and clearly this is the skill they are testing for here. Anyone who knows how to hunt for the required answer and who knows what grams and kilograms are, and who knows that multiple-choice questions only have one answer will figure out right away that the test author put in grams and kilograms as wrong answers.

This, of course, has absolutely nothing to do with learning. Standardized tests never, and schools rarely, ever have anything to do with real learning. Music class in Junior High School almost convinced me that music was boring. Thank the Lawd they didn't have sex education!

jnaggs

05-07-2007 10:27 PM ET (US)

179 i once had a test question in philosophy 201 class (logic and reasoning). in the directions it said choose the best answer. for one of the questions there was a "D)none of the above."

i knew that answer B was a exact quote from the book so that was my first reaction.

but then i started to think about the fact that this was a test on logic and reasoning and on top of the test in big bold letters it said to read the directions carefully. it ocured to me that even an exact quote from the book could not possible be the best answer if none of the above was an option because that would imply that B was the best of all possible answers which it is clearly not. eventually i decided to select D because i thought that if i got it wrong then i could just point out the error to my professor.

he did not see my logic or reasoning.

Brendan

05-07-2007 10:02 PM ET (US)

178 Thinking outside the box is not allowed. Please proceed to the Ministry of truth for reeducation.

Philip Nel

05-07-2007 10:01 PM ET (US)

177 Dear Carrie,

After posting my answer, I went back and read a few earlier ones. Other writers also seem to have checked their fridges and discovered that applesauce is measured by weight, not fluid volume. I was particularly interested to find that several different countries measured applesauce by weight (in grams). So, based on this admittedly ad hoc survey, grams are the global standard for measuring applesauce. Well, having solved that ... um ... vital problem, it's back to work for me --

Best,

Phil

Carrie

05-07-2007 09:54 PM ET (US)

pshaw

05-07-2007 09:53 PM ET (US)

blake

05-07-2007 09:52 PM ET (US)

Philip Nel

05-07-2007 09:51 PM ET (US)

Carrie

05-07-2007 09:49 PM ET (US)

Michael Brown

05-07-2007 09:47 PM ET (US)

Kadin

05-07-2007 09:43 PM ET (US)

MHotel

05-07-2007 09:36 PM ET (US)

snork

05-07-2007 09:16 PM ET (US)

Carrie

05-07-2007 09:13 PM ET (US)

brian

05-07-2007 08:59 PM ET (US)

Kwitcherwhinin'

05-07-2007 08:59 PM ET (US)

richtard

05-07-2007 08:55 PM ET (US)

176 Philip:

I too checked my fridge. The discussion got the better of me.
It was in millilitres. Next to the french side of the label :)

175 The answer is boingboing needs to have comments. "Web 2.0" hypocrisy. Everyone goes on about user generated content, "dead tree media", and DRM, and the users of boingboing themselves can't even take part in discussions that appear on the site. Hands up who here has ever been one of those "x says" after a story? Everytime I read a boingboing story now that I want to take part in one of the "discussions" after it (which is quite clearly all chums of the editors) it makes me want to scream. I KNOW I'm not alone, and I would say you boingboing guys have to take a serious look at how many readers you're pissing off/turning away with this. You're obviously worried about falling ad revenues, or else you wouldn't be posting those stupid "week in review" posts for more googleranking....

I applaud Mark for doing more of these forum posts. And I'm done. I expect this will be deleted rather rapidly.

174 My brother once took a test in a shop class on which one of the questions was: "Your name is always _____. He was marked as incorrect, if I remember correctly, when he put his name in the blank. The correct answer was "indented".

173 At first I thought Sara should use a liter (B) to measure how much applesauce she made this fall. A liter measures fluid volume, and applesauce is fluid. On the other hand, a gram and kilogram both measure mass -- so, does Sara want to measure the applesauce's weight? If so, then we should look at gram (A) as an option. Unless Sara has been a prodigious producer of applesauce, the kilogram (C) seems too large (a kilogram is 1000 grams). Since a centimeter (D) measures length, we can safely rule that one out. To give credit where it's due, I clarified this answer for myself by consulting the Second Edition of the New York Public Library Desk Reference (1993), pp. 22-23.

Still, this only narrows the choice to two: liter (B) and gram (A). For a final arbiter, I decided to look at a jar of applesauce and see how the manufacturers measure it. Would the label measure the contents in terms of its weight (grams) or fluid volume (liter)? A container of Mott's applesauce measures its contents in ounces, the "standard" version of the metric gram. (I place "standard" in quotation marks because it seems silly to call this "standard," when only the U.S. still uses a non-metric system of measurement). Anyway, applesauce seems to be measured in grams (A). I'd be curious to know, however, if it's *always* measured in terms of its weight -- that is, in terms of grams or ounces. Is this consistent in all places where applesauce can be purchased?

172 oooo Kadin, I like your answer best.
Too bad there's wasn't a:

e) mole

(But I always thought it was "mol"?)

171 The correct answer is obviously litre - however a pseudo-liquid could be measured in grams or kilograms as well. Not centimeters. A more appropriate set of choices would have been:

- a) pounds
- b) litres
- c) ounces
- d) millimeters

But hey - the people that write these tests for grade 4's aren't exactly rocket scientists - they're low-paid educators who probably whip these things up in an hour.

170 The answer is mole, and that's not even an option. The SI unit of amount (the question asks "how much") is the mole, therefore that is the answer. If the question asked the *mass* of applesauce, or the *volume* of applesauce, one of the given options would make sense. As it is, the correct answer appears to have been left off the list.

169 the answer is "hogsheads" of course.

168 Apple sauce is a liquid. The correct measure (and best choice) is litre (or more likely millilitre). If it were jam, or something that didn't run, grams might be acceptable.

167 sure, by applying a ridiculous context to the original question, you could measure applesauce using centimetres.

"How much" is not a very good question (nor is it even very good english, but I digress). One could propose that the tool used to make the measurement is a container with centimetres marked at intervals along the side. It happens.

Silly tests; silly answer.

166 The centimeter and cubic centimeter are different units of measurement. A centimeter is a unit of length, and a cubic centimeter one of volume. You can't measure applesauce using centimeters unless you have one-dimensional applesauce.

165 The answer is the simplest, that is, (A) gram. I hope you offer this much concern over matters of far more import to which students are exposed, or not exposed, in classrooms today.

164 Furthermore I fully intend to submit myself, and my ghastly comments, for analysis to the relevant authorities. Who have kindly offered to help me through these worrying times. Many apologies for the inconvenience.

Carrie
05-07-2007 08:52 PM ET (US)

163 David:

Applesauce is a non-newtonian fluid. Not quite a liquid.

;))

(Now i'm just being a jerk.)

richtard
05-07-2007 08:45 PM ET (US)

162 Edited by author 05-07-2007 08:45 PM

I'm truly sorry for causing trouble on this message board. I have been dealing with some personal problems lately, and I am struggling with anger management issues. Sincere apologies to all.

Mike
05-07-2007 08:40 PM ET (US)

161 Reminds me of a standardized test practice question that I took about the same age. I don't remember the exact question, since this happened about 13 years ago. It was something like, which of the following words is spelled wrong?

- A) WALK
- B) HOUSE
- C) SINE
- D) EIGHT

I knew that the answer was C, but also that "sine" is a word.

David
05-07-2007 08:34 PM ET (US)

160 Edited by author 05-07-2007 08:36 PM

It's all 4. Such a thing as applesauce if we consider it to be a liquid can be measured in all the units accurately. If weighed you can convert to grams and kilograms. By calculating the volume of it's container you can get liters which you can then convert to 10 cm cubed. With the average density you can even get all 4 answers with simple conversions from one measurement of volume.

Also, Litre and Liter are the same thing, Americans spell most things er rather than re, such as theatre.

richtard
05-07-2007 08:29 PM ET (US)

159 I believe that the censorship employed in these matters was fully justified. Censorship in all its many forms is to be applauded at every turn!

"Disabusing people of the wrongness of their very wrong opinions, in a manner that was wrong and liable to cause feelings of wrongness was wrong of me."

- Edmund Burke, The Triumph of Evil.
Mark 2

Messages 158-157 deleted by topic administrator between 05-07-2007 08:25 PM and 05-07-2007 08:15 PM

Carrie
05-07-2007 08:04 PM ET (US)

156 Coming from a country that uses metric, and having been educated as an engineer I can say that I know at least one thing:

It's LITRE. Not liter.

And I can surmise another thing:

This question can be answered with all four choices - without context, they are all correct.

blender
05-07-2007 07:58 PM ET (US)

155 richtard,

You might want to explore why you care about being right so much that you insult people over such a trivial matter--especially since they're just chatting about it and not offering an offense to you.

05-07-2007 07:57 PM ET (US)

154 Deleted by topic administrator 05-07-2007 08:05 PM

oldschool
05-07-2007 07:48 PM ET (US)

153 they want to know HOW MUCH apple sauce she made. Volume would tell you how much space the amount of apple sauce she made takes up. This could be influenced by things like air pockets if its viscous or density of apple chunks. The mass, in kg or g, would be a better measure, because it would give an accurate measure of the AMOUNT OF APPLE SAUCE.

05-07-2007 07:44 PM ET (US)

152 Deleted by topic administrator 05-07-2007 08:05 PM

Elvis
05-07-2007 07:40 PM ET (US)

151 Wikipedia says that since 1960 the internationally accepted metric is the SI: http://en.wikipedia.org/wiki/Metric_system
Thus the right answer should be kilogram.

jonathan
05-07-2007 07:23 PM ET (US)

150 Russ: The question isn't "what SI unit she should use" it's, "what METRIC unit she should use." They're ALL METRIC.

Years of taking craptastic standardized tests tells me the "most correct" answer is liter. Centimeter is not a standard measurement for food. Mass and volume are. Since there are two mass measurements, they both can't be right, so they both must be wrong. Therefore, we're left with liter.

But seriously, Either mass or volume would work in practice.

Now watch the answer be kilogram because nobody makes mere grams of sauce.

Jill

05-07-2007 07:20 PM ET (US)

149 The question came from a test-prep workbook. Those are NOT written by the folks who write the actual exam. They are written by any number of publishers who specialize in practice workbooks, just like you can buy GRE practice books written by Kaplan or other folks unaffiliated with the ETS that creates the real exam. The real writers of these workbooks are badly paid, given absurd deadlines, and insufficient guidelines. I know, because I'm one of them. If you do quality work, the practice books cost more and the school districts don't buy them. Chances are, the question used to ask what liquid measure or some other clarification was in there, and a zealous editor took it out for pagefit without thinking.

Russ

05-07-2007 07:16 PM ET (US)

148 The answer is kg. That is the SI unit. Very stupid question though

05-07-2007 07:15 PM ET (US)

147 Deleted by topic administrator 05-07-2007 08:05 PM

BDAdams

05-07-2007 07:10 PM ET (US)

146 I think that your logic must be as faulty as the questions. Anyone who would use a movie director, screenwriter, and a magazine editor as experts in the knowledge of anything other than their own field cannot be too smart. Why didn't you use someone who is intelligent in a mathematical field? For example, an engineer, an accountant or a bank teller.

dhasenan

05-07-2007 07:09 PM ET (US)

145 She already made it and, presumably, packed it. Into jars, most likely. And most likely they're filled unevenly. Most likely, there's a limited number of types of jars.

So in order to measure the volume, she'd have to pour out every single jar, measure it, then repack. This isn't fun; you usually have to boil every jar to seal it. That could damage the apple sauce, her jars, and her lids. Thus liters is a bad option.

Kilograms? If she only has a few types of jars and has some spares for each type, this is reasonable. Still a lot of work if she's made a lot. But that's going to result in an estimate, unless she chooses to unpack each jar and measure just the contents again -- she has to weigh the jars with applesauce in them and subtract the weight of a similar jar.

The only reliable measurement she can make without opening all the jars is how much shelf space they take up. The correct answer, therefore, is centimeters. Incidentally, that is the quickest measurement to take.

Craig

05-07-2007 07:09 PM ET (US)

144 Well, if you are talking about mass than grams make the most sense for this little amount. Kilograms would only be used if you were measuring something larger than a kilogram. A liter is a unit of volume/liquid, and a centimeter is a measure of length. The only one that makes sense is a gram.

05-07-2007 07:07 PM ET (US)

143 Deleted by topic administrator 05-07-2007 08:05 PM

Theo Bee

05-07-2007 07:03 PM ET (US)

142 Such things are a matter of practicalities.

Kitchen use would be liters, housewives use that to measure liquid material and this would be the correct answer for a fourth grader.

Factories use things called checkweighers, although they usually fill liquids volumetric, the final double check for correct fill is usually done by weight, hence they mark cans in grams or kg.

To confuse the issue further, some cans are checked for filling height by means of gamma rays etc, (beer for example), since the material and can size are known they still mark these in grams or liters.

Kevin

05-07-2007 06:44 PM ET (US)

141 It's obvious from this very debate that it is a bad question. Don't try to answer it, just move along.

Did anyone ever post what the official "correct" answer was?

pope

05-07-2007 06:38 PM ET (US)

140 HA! Your country teaches creationism in science classes and you worry about weights & measures?

MrWeeble

05-07-2007 06:32 PM ET (US)

139 Well, I'm in a country using the metric system (UK), holding a jar of apple sauce (Tesco Value Apple Sauce actually) and according to the label it contains 280g (and worryingly only 30% apples plus all sorts of other crap - I'm so not buying this type again) so the correct answer in the "real world" is grams, or, if she made more than 4 of these size jars, kilograms.

That the question includes both of these as mutually exclusive answers suggest that the person setting the question is looking for an answer that isn't one of these correct answers and therefore the question is completely without merit.

micah

05-07-2007 06:30 PM ET (US)

138 so so far we have A and C being correct but potentially inaccurate because of the change in volume between liquid and solid applesauce; B as the measure that is guaranteed to be accurate but may not be used due to canning jars often using liquid measures; and D as potentially accurate so long as you speak in terms of cubic centimeters.

good times!

Kane

05-07-2007 06:27 PM ET (US)

137 A or C depending on how much there is and whats appropriate

Litre and Cm aren't strictly metric,

applesauce for brains

05-07-2007 06:26 PM ET (US)

136 Write your congress person! I'm not kidding. Federal legislation, the "No Child Left Behind Act" is behind this bunk. Thanks to No Child legislation, US schools use multiple choice tests, compiled by committees, to assess school and demographic student-groups. This is a 'norm referenced' test with questions chosen according to statistical chance that a kid will get question right, not if they were taught material. Trend is to provide 'real-world' context for math questions. This committee has confused 19th cent. farm with 21st cent. street life. We've 'standardized' learning alright, but the standards have nothing to do with knowing and doing math.

Scott

05-07-2007 06:21 PM ET (US)

Steve H

05-07-2007 06:19 PM ET (US)

roboshobo

05-07-2007 06:19 PM ET (US)

Webmac

05-07-2007 06:19 PM ET (US)

Jan

05-07-2007 06:15 PM ET (US)

E&N

05-07-2007 06:05 PM ET (US)

Chris

05-07-2007 05:59 PM ET (US)

Will

05-07-2007 05:57 PM ET (US)

Johan

05-07-2007 05:55 PM ET (US)

flunked high school

05-07-2007 05:48 PM ET (US)

Paul

05-07-2007 05:45 PM ET (US)

Paul

05-07-2007 05:42 PM ET (US)

135 Anything except centimeters clearly specifies the amount of applesauce and therefore is just as good as any other unit without knowing anything else (like whether she has a scale or a container with volume markings). If I tell you that I bought 0.5kg it is just as useful as telling you 500g or 0.35 liters (depending on what the exact density is); given the appropriate equipment, you can measure out the exact same amount of applesauce.

134 In New Zealand, and I imagine all other metric countries, you can't really predict whether some ambiguously liquid products will be measured in g or mL.

This site makes you jump through hoops, but look at <http://www.foodtown.co.nz>. Click Browse and then search for apple sauce. Some are in mL, some in g.

Only water, juice, cola, alcohol, and other obviously liquid products are exclusively measured in L (or mL)

133 B) Liters, c'mon, applesauce is a liquid for practical purposes. this doesn't seem like an issue appropriate for hairsplitting. not to mention it asks how much she made this fall. in that context, we should assume how much applesauce she made over several months. one would hope that would yield an amount more than a few kilograms or picometers...if not, maybe Sara needs a new hobby or profession.

132 This is a stupid question.

I think the intended answer is liter, because applesauce is liquid.
But in real life it's gram (Contains 500g of apple sauce).

- 2 kilograms of apples
- 500 gram of apple sauce
- 1.5 liter of apple juice

Only centimeter is stupid.

Webmac (Germany)

131 I am German an we do metric only.
The right answer is "Liter" for 4th grade.

Later she will learn about specific weight and that just 1 Liter of water is also 1 Kilo.

However 1 Liter of melted red hot iron is not.

130 Looking at a jar of TreeTop brand applesauce: 1.34 kg measure on front and serving size measure of 1/2 cup (126 g) on back. TreeTop is no Motts but I think they still know applesauce. The answer is grams if she made fewer than 8 servings or kilograms if she was busy.

129 Kilograms. Stores sell cans/jars of applesauce in ounces. If Sarah was using metric, she'd use an equivalent measure of weight. As previously mentioned, grams would be too small for a season's worth of produce, so that means kilograms. Probably Sarah shouldn't be so anal. Then again, neither should I.

128 I can make a case for all four; granted, not a really good one, but a case nonetheless.

- A) Perhaps the applesauce has been dehydrated, or it is in a container that does not facilitate easy fluid measurement, such as a large barrel.
- B) Presumably the one that the teacher wanted the students to pick.
- C) See A, but maybe she had a lot ;)
- D) Yeah... This is the really weak case. Obviously cubic centimeters would work, on the same lines as option B, or perhaps... I really don't know. Heh.

127 You can *not* say that a liquid needs to be measured by its volume and a solid by its mass. Those are often the easiest measurements to take, but not in any way the "correct" thing to measure. A liquid has both volume and mass, and so has any solid (or gas for that matter).

Everyone reasoning that apple sauce is a liquid and therefor it should be liters is mistaken. Same for everyone saying that it should be grams or kilograms because they have solid apple sauce ideas.

Volume is a poor measurement, because it is dependent on temperature and pressure. The safest measure is mass. The base unit in SI is kilograms, so that is the best answer.

126 she put them in liter pitchers, but then it got so cold, they all froze!

now her measurement in liters are worthless! (since freezing water expands)

if only she had used the standard for sara-made applesauce measurement... 14 and a half mason jars!

125 Kilograms of applesauce? I think not; its a fluid, thus it should of course be in liters. The extra option 'gram' is even an extra hint towards weight being an improper measurement.

I don't think anybody would object if you asked the same question, only replaced the answers with (A) ounces, (B) fluid ounces, (C) pounds or (D) yards.

124 It would never, ever, be D. Don't think it could be D... SERIOUSLY.

C applies to volumes of liquids (apple sauce isn't a liquid.) debating that shows you're not smarter then a 4th grader.

Guy Mann
05-07-2007 05:35 PM ET (US)

mathematician
05-07-2007 05:31 PM ET (US)

Rainer
05-07-2007 05:30 PM ET (US)

Gerbrant
05-07-2007 05:29 PM ET (US)

Content Knowles
05-07-2007 05:28 PM ET (US)

gbr
05-07-2007 05:27 PM ET (US)

Content Knowles
05-07-2007 05:25 PM ET (US)

lollerkeet
05-07-2007 05:22 PM ET (US)

McWym
05-07-2007 05:21 PM ET (US)

VictorianRadical
05-07-2007 05:20 PM ET (US)

VK2TDS
05-07-2007 05:20 PM ET (US)

Roott
05-07-2007 05:19 PM ET (US)

- I image Sarah made a bit more then a kilogram of applesauce over the fall, so the answer is C. If Sarah made less then a kilogram it would be A. Previous questions undoubtedly talked about Sarah's orchard (so your all being indignant for no good reason)
- 123 This question is perfectly reasonable. The only possible correct answer is liters because you are dealing with fluids. D, centimeters, wouldn't make any sense unless it was cubic centimeters but it's not. The gram answers are obviously wrong because you want a standard measure of comparison of fluids and based on various consistencies between years the same volume of applesauce could vary in mass.
- 122 The question is complete crap, but the answer is liter. I learned very early (probably about fourth grade) that when taking these tests, it's all about figuring out the questioners intent. The original questioner probably assumed that everyone would go for a volume measure, and then they threw in some other units arbitrarily. Centimeters probably didn't raise any red flags, but someone probably saw kilogram and raised an objection, claiming it was also a reasonable (or at least not unreasonable) answer. The solution? Put gram in also. If one is right, the other must also be, and you're not allowed to choose two answers. Thus, the correct answer is liter. I have taken far too many standardized tests in my life, and I have seen this exact situation many, many times. The idea that one potentially reasonable answer is invalidated because to admit it would admit another, and there's only one right answer, is complete crap.
- 121 Liter. Why is this confusing? Anyone who's familiar with home canning knows you use pint or quart (liter) jars. Therefore, this is how Sara would quantify how much she made.
- 120 As for all the people who defend the question and come up with all kinds of rationales (solid / liquid; "common sense"; "logic puzzle"; what supermarkets tell you; whether metric sucks or not (it doesn't)) - please get it into your head that the question is just plain wrong. A faulty test question - that's all. You can discuss whether tests should get closer scrutiny before being handed out, or you could argue whether minimal educational standards should be required for test writers, etc. but trying to figure out what the only correct answer is a waste of time. As for those of you who think there's only one correct answer - I pity you. *In the Netherlands we don't have "common sense" - we prefer "gezond verstand" and it trumps "common sense" 9 out of 10 times.
- 119 Because applesauce is more or less a liquid, the answer is, it's measured by the liter. It's sort of a trick question, I agree, because of the "more or less" part. The problem here, and the second reason it's tricky, is because some foods that are liquid enough are sold by the kilo, and some are sold by the liter.
- The reason I think the answer is B is because both kilogram and gram are both possible answers, but they cancel each other out - it wouldn't be one but not the other. Water is measured in liters. Ergo, deductive reasoning brings me to B.
- 118 Litre, or possibly kilograms if one wants to be lame. Grams would just be silly to use, unless you make applesauce for ants. Centimeters would only make sense if they were cubic. Anyhow, I would go for litre. Over here in metric-land, we use kilograms if it's solid, and litres if it's not. End of discussion.
- /norwegian
- 117 Because applesauce is a liquid, the answer is, it's measured by the liter. It's sort of a trick question, I agree, but the bottom line is, liquids/liters, solids/grams,kilograms.
- 116 Centimetres is not a correct answer. Cubic centimetres could be used, but litre is a much easier way of saying the same thing.
- 115 Honey, another viscous liquid, is almost exclusively sold by the kilogram, etc. Those saying the answer is "obviously" one thing or another are displaying some degree of ignorance.
- 114 If you pour it, its a liquid. Liter is the most obvious answer. If you wanted to know who much sauce you've made, you wouldn't get out a little scale and weigh it and you wouldn't stick a ruler in the pot to see how deep it was. You would pour it into a measuring cup. Duh.
- And you can blame Noah Webster for the reason why you Brits say litre, colour, and grey while we Yanks say liter, color, and gray. He felt that we needed our own language to separate ourself from England linguistically as well as politically. There was no reason why he settled on these spellings. He just thought they looked nice.
- 113 There are two common 'Metric' systems, MKS and CGS, for Metres, Kilograms and Seconds; or Centimetres, Grams and Seconds. Early systems were based on CGS, but most countries use MKS these days. Wikipedia under the METRIC SYSTEM can tell more. BTW, in most of the metric world, METRE is the correct spelling. So which system does the USA use for metric?
- Most food is legally sold by weight around the world. I guess I would be asking for a clarification from the TSA (if I was in the USA) on if the sauce is a liquid or a solid. Assuming solid and therefore by weight, I am assuming there is part of the question that is missing. At the beginning they said 'Choose the BEST answer'. And then they left it up to the child to choose the definition of best - being in base SI units, or in everyday units.
- When I was in my first year of school there was a similar question, with the question on which picture would wake the baby. The photos were of a plane, a vase on a table, a cat and a chair. Apparently I chose everything except the plane - after all it was likely to be too far away to cause much noise, but the cat could use the chair to knock the vase onto the ground. I dont think the education system was designed for answers like that.
- 112 I've lived in a metric system country for four years (France), and I was so befuddled by this question I went and started rooting through my fridge. No applesauce, but plenty of liquidy-solidy things:
- Tomato sauce-- grams
- Salad dressing-- milliliters

- Yogurt-- grams
- Bourgignonne sauce-- grams AND centiliters
- ????
- I feel no closer to being able to answer this question.
- amuderick**
05-07-2007 05:18 PM ET (US)
- 111 This is the kind of question I hated in standardized tests. All four are possible correct answers. Questions like these made me realize that, as an elementary school student, I was smarter than many people who prepare standardized tests.
- Do you realize how many review committees this passed through before it ended up on your daughters desk?
- gsch**
05-07-2007 05:18 PM ET (US)
- 110 Since the 1960s the International System of Units (SI) has been the internationally recognised standard metric system. The following units are the base of the SI system:
metre [m], kilogram [kg], second [s], ampere [A], kelvin [K], mole [mol], candela [cd]
- The litre [l] is **not** in the base set of units in the SI system, however it is considered as a "non-SI unit accepted for use with SI"
- Therefore the answer should be "all but litre". It is indeed a lousy question.
- Martin**
05-07-2007 05:17 PM ET (US)
- 109 Brian: Sweden, Germany, and many other metric countries spell it "liter".
- Gerbrant**
05-07-2007 05:16 PM ET (US)
- 108 As a resident of a fully metrified country (the Netherlands), I can tell you that three of the answers are equally correct. Sauce, as a (viscous) liquid with (presumably) a standard density, can be expressed equally well using units of mass as using units of volume. Which is the same conclusion that was going through your mind, but maybe it's nice to hear some confirmation from the other side of the pond. For what it's worth, liquids sold in supermarkets can use either. For example (looking in my fridge): Jam - 450g; Sugar syrup - 500g; Mayonaise - 750 ml; Milk - 1 l; Chilli sauce - 700 ml; Ketjap - 500 ml; Tomato paste - 140 g; Blended garlic - 110 g. As you can see, both units are used. Apparently these examples use kg for small amounts, but don't be surprised if that's a fluke of statistics and small sample sizes.
- dunkin**
05-07-2007 05:14 PM ET (US)
- 107 I strongly disagree. This is an EXCELLENT question. You see, what they are testing is what we used to call common sense. All those with common sense know the answer is Liters. All those without common sense, like managers, want to pick over the bones of the question for no reason until it's going home time. T
- Brian**
05-07-2007 05:12 PM ET (US)
- 106 Edited by author 05-07-2007 05:12 PM
What interests me is how Americans spell it "liter" rather than the way we metric countries spell it (litre). Why's that, then?
- not preggers**
05-07-2007 05:10 PM ET (US)
- 105 Preggers: "Applesauce is not really a liquid, it is an irregular solid". Ah yes and "fire don't melt steel." too.
- Daemon**
05-07-2007 05:10 PM ET (US)
- 104 When answering the question "how much?", liters grams and kilograms are all valid units of measurement. Centimeters works, but is abit wierd unless the question was talking about surface area coverage.
- The "right" answer is liter, but only because that's what's usually used to measure liquids. It's pretty much just a tradition. There's nothing incorrect about measuing liquids by weight.
- lollerkeet**
05-07-2007 05:09 PM ET (US)
- 103 Glean - kilos and grams do not measure weight. Newtons measure weight. Gravity on Earth is simply close enough to uniform that we can measure something's weight to determine its mass.
- Preggers**
05-07-2007 05:05 PM ET (US)
- 102 But it also could be measured in kilograms, to measure mass. Applesauce is not really a liquid, it is an irregular solid, and can be equated in pounds as well. The liter would make sense if she were measuring a normal liquid, like water.
- Dan**
05-07-2007 05:04 PM ET (US)
- 101 This is not really a question about metric measures, but rather a question about the SI (système international), which is one of several systems that are referred to as "metric".
This wikipedia article gets it right: http://en.wikipedia.org/wiki/Metric_system
- The SI uses kilograms and meters. Another commonly used system in physics is the so-called CGS system (centimeter, gram, second). So if Sara stuck to the SI she would measure the amount of applesauce either in cubic metres or in kilograms.
- The really really bad thing about this question is that kids should be taught that metric units are easier to use and more logical than imperial units. Instead, they'll think these units are a nuisance because they can't seem to find the right answers to stupid questions like this one.
- lollerkeet**
05-07-2007 05:03 PM ET (US)
- 100 The question is wrong.
- You weigh it. You don't 'measure' in grams or kilos, you measure the mass and record in grams or kilos.
- Without an image to estimate with, students should not be penalised for imagining she had only a cup of applesauce or a mixing bowl full.
- jitterbugmom4**
05-07-2007 05:03 PM ET (US)
- 99 And people ask me "why did you choose to homeschool your kids again? They were doing so well."
My daughter was in gifted and talented for two years. The GT were exempt from the "standardized" tests but some parent wanted her kids to take 'em so they all did. While going through the pre-test practice questions these kids were taking them apart and pointing out all the faults..rationalizing all the answers as possibilities etc. They had a great time. When the teacher passed out the real tests she told the kids "No remember these are standardized tests, so please, children THINK INSIDE THE BOX".

oompa
05-07-2007 05:01 PM ET (US)

some guy
05-07-2007 04:59 PM ET (US)

glean
05-07-2007 04:59 PM ET (US)

Christovir
05-07-2007 04:59 PM ET (US)

Andrew
05-07-2007 04:58 PM ET (US)

Dan
05-07-2007 04:55 PM ET (US)

LinkMan
05-07-2007 04:55 PM ET (US)

Gracchus
05-07-2007 04:52 PM ET (US)

Phil
05-07-2007 04:49 PM ET (US)

some guy
05-07-2007 04:46 PM ET (US)

Robert
05-07-2007 04:44 PM ET (US)

nut
05-07-2007 04:41 PM ET (US)

Roose
05-07-2007 04:41 PM ET (US)

Mike
05-07-2007 04:40 PM ET (US)

blarghooie
05-07-2007 04:39 PM ET (US)

Wham, electrical engineer
05-07-2007 04:39 PM ET (US)

Mike
05-07-2007 04:36 PM ET (US)

Jesse
05-07-2007 04:33 PM ET (US)

Helen
05-07-2007 04:33 PM ET (US)

98 Wow, the pseudo educated pedants are really bugged by this?

97 kilos and grams do not measure weight. Newtons do.

96 Dan is correct.
Litres are a measurement of liquid. Applesauce, as far as I know, is still a liquid, hence the sauce part of the name.
Kilos and grams measure weight. (yes, they also measure mass, it's a long story.)

95 Yes, this is a completely unanswerable question. I think both liters and kilograms are equally correct, though all are technically correct.

It's almost as bad as a standardized test question I once encountered which asked why Cuba was a major threat to national security. The "correct" answer? Because "It is a communist nation just 90 miles from our shores." That was in 2001. Talk about culturally loaded value statements. The test was written by Georgia state legislators and must be passed by all high school students before they can graduate.

94 You don't measure in litres at all!

It's a culturally terrible question: in the United States cookery recipes routinely are given by volume: 1/2 cup of applesauce, 2 cups of flour, e.g., but in other English speaking countries (incl Canada, Ireland, the UK etc.) the same items in recipes are specified by weight: 250g of applesauce, 500g of flour, 50g of butter and you use a kitchen scale (or your common sense) to measure it out.

I'd think of the poor kid whose mother is from the UK and knows grams are used for flour, chocolate, sugar and so on...

93 The answer is liter. It's used to measure volume. It is a dumb question though.

92 Standardized tests contain all kinds of errors. Fortunately, most of the test administrators care enough to respond to feedback about questions like these, which most often pop up on practice tests and "trial" sections of larger exams where they're trying out questions before they "count."

When I took the GRE a few years ago, I came across a question in the math section that I was sure had two possible correct answers (particularly odious on a computerized test like the GRE where you are forced to answer before getting the next question). I picked one of the two correct answers, made a note of it and moved on.

At the end of the exam I told the test proctor about it and he promised to pass the information on to ETS. I didn't think anything would come of it. But a couple months later I got a letter in the mail from ETS thanking me for bringing the error to their attention and reassuring me that it had been on the "trial" section of the test and hadn't affected my score.

I don't know if whoever administers this test cares as much as ETS, but I'd certainly have the teacher bring the question to the administrators' attention. Maybe your daughter will get a cool letter in the mail like I did.

91 Yes, it's a stupid question. All Children Left Behind

90 I know this is to test their abilities with the metric system, but really it's pretty dumb. When is the last time anyone in this country published a cook book using metric measurements? Can't there be just a little reality injected into testing?

89 I'm not reasoning against them. I'm saying it to poke fun at the test maker's lack of knowledge about the metric system.

88 Ahhhh, the learning curve of public education strikes again. Weeding out the entrepreneurs and non conformists since the use of school bells.

87 Joshua (PhD Chem Eng.) Oh come off it. If it flows then it's a fluid. Ok, you have special cases such as tar but we are talking about applesauce here.
Who do you know that makes solid applesauce?

86 These test scores fund your local school or take funding away.

85 And Mass is easily measurable, gravity is approximately the same everywhere on the planet, additionally use of a "balance" scale is a direct comparison of mass.

84 This question alienates people who have never eaten applesauce. I wish that wasn't actually true.

83 Bryn has it. The best answer isn't always perfect but liter is the best answer. I wouldn't have added Bryn's #4 for this particular question but it is also true. The questions life presents, in school and out, often have the knotty tone of this one.

82 "Pint" is not a metric unit of measure

81 It would actually be very difficult to measure the mass of applesauce, without correcting for gravity. If Newtons had been given as an option that would be better than kilograms or grams. But not something I learned until high school. Anyway, 'pint' would still be the best possible answer.

80 It's a terrible question. Anyone who has lived in Europe for any length of time will know that many recipes are expressed in weight, not in volume as in America. So it is also culturally biased.

Joe Abley

05-07-2007 04:33 PM ET (US)

Johan

05-07-2007 04:31 PM ET (US)

joshua

05-07-2007 04:28 PM ET (US)

uboot

05-07-2007 04:25 PM ET (US)

Thadd

05-07-2007 04:24 PM ET (US)

Bryn

05-07-2007 04:24 PM ET (US)

Adolf Hilton

05-07-2007 04:15 PM ET (US)

some guy

05-07-2007 04:15 PM ET (US)

Pete

05-07-2007 04:14 PM ET (US)

anon

05-07-2007 04:12 PM ET (US)

flyermoney

05-07-2007 04:08 PM ET (US)

adam

05-07-2007 04:08 PM ET (US)

Jon Soroko

05-07-2007 04:04 PM ET (US)

79 Never mind the poor choice of available answers, what about the grammatical and spelling errors in the question? "Apple sauce" is two words, not one. "Metric" in this case is an adjective, not a noun.

But really, the core things wrong with this question are (a) the word "if" on the second line, implying as it does that there's a reasonable alternative to the metric system to use when teaching children about the world, and (b) the knowledge of children is being assessed using multiple-choice tests, which encourage learning by rote instead of real understanding.

78 It amuses me how many people seem to think they can reason against "gram" and "kilogram" based on the fact they are both measures for mass. "Two answers are the same, so neither of them can be it," they think. That is a very dangerous reasoning. Don't use that on your next exam! ;-)

They preferred way of expressing a value in the metric system is to use a base unit. Therefor, answer "C) kilogram" must be the right one here. Using gram, liter or centimeter, might be handier ways of calculating in certain problems, but the end result should always be converted to a base unit for best comparison with other results. A, B and D are not base units, wether to measure mass or volume is irrelevant here.

Oh, and I'd only measure applesauce in centimeter once it starts raining applesauce.

77 I'm a Ph.D. chemical engineer, and I think it's a bad question. Apple sauce doesn't strike me as clearly a solid or a liquid. Depends on who made it. If that is the point of the question, why not use lemonade as the food?

76 Litres. Don't use over-think. You can measure something in a variety of units if you are inventive enough. For example, I can measure time in meters if I make the right definitions.

75 Edited by author 05-07-2007 04:25 PM

a millileter is cm^3 , so if she didn't really like applesause much, and made only a little this fall, cm might be a good guess.

74

What you fail to understand is that what the question is testing has nothing to do with science, measuring, or the metric system. Its about how to play the standarized testing game. Using your imagination and being creative hare horribly detrimental to standardized test scores.

The question testing:

1) political savvy: children are suppose to learn the metric is better

2) logic: knowing that two answers measure mass, and that there cannot be more than one correct answer, EVER.

3) Common sense: know that apple sauce does not have a height or width independent of a container, or frozen... don't think too hard, or you'll get it wrong! :)

4) Social: what does the test creator want me to answer?

73 flyermoney: The Nazi science of Welteislehre (the theory that most of the universe was made of ice, <http://en.wikipedia.org/wiki/Welteislehre>) also had water as its basis.

special [k]: You were firkinpwned a half hour before your post.

72 This is ridiculous. Not only can this be measured in both mass and volume, the kilogram and the gram are both units of mass. How could they not know something like that! In fact, since rainfall, which is liquid, is measured in cm, even cm could be a resonable answer!

71 Sara wants a job writing multiple-choice tests. Which of the following will win her the job?

a) Include multiple correct answers to each question.

b. Write the questions illiterate

3 - Be sure not to understand the questions or the answers.

E, centimeters

70 It is clear that the answer they are looking for is (b). However, the question is very poorly written.

69 I'd say that one could measure applesauce by volume (required jar size), but comparable foodstuffs, such as jam, jelly and honey, are measured (=sold) by grams, until it reaches one kilo; there are instances where soup, applesauce and the likes are sold in 1-litre cartons. So, really, there are 3 possible good answers for the "Applesauce question".

As for the "coldness" of the metric system, I don't quite agree. In the metric system, length, volume, weight and temperature (and pressure, but I'm not brainy enough to delve in that field) have the same common denominator as life on this planet:

Water.

1 liter of water = $10 \text{ cm} \times 10 \text{ cm} \times 10 \text{ cm} = 1 \text{ kilogram}$. As for temperature, 0° and 100° Celsius are, respectively, the freezing and boiling points of water at sea level. Pure and simple, easy to memorise.

My 2 euro cents.

68 so the US finally switched over to the metric system?

67 1. Three of the answers are correct - apple sauce could reasonably be thought of in terms of weight, mass, or liquid measure. This seems indisputable. My thought as an attorney is - if this question were litigated - you'd need a dissembler of great stature to defend the question as fair.

2. If it's the same ERB I know of - they've been around a long time - sort of a gatekeeper to NYC private schools - and mentioned either in Nicholas Lemann's book about the SATs, or the NYT writer's book - he spent a year following college admissions officers - perhaps Jason DeParle?
3. A more important and subtle question - do Frauenfelder and/or his daughter make good apple sauce? If so, why haven't they shared the product - or at least the recipe - with BB's faithful readers?
4. Making the argument that "D" - the linear measure answer - is correct - could be persuasive if the Vice President were to coordinate the press strategy. (semi-solid intelligence that apple sauce is now being traded in linear measures - used to mark roads, etc.)

JS

Rob Cockerham
05-07-2007 04:02 PM ET (US)

- 66 Sara's failing grade on standardized tests this fall have led her to question the states of matter. Which of the following is not a liquid?

- A) Wet sand
- B) Cole Slaw
- C) Mercury
- D) Tar
- E) Cherry Slurpee
- F) Partially Hydrogenated Cottonseed Oil
- G) Applesauce

special [k]
05-07-2007 04:02 PM ET (US)

- 65 I'd say the most appropriate answer is:

E. Firkin

(source: http://en.wikipedia.org/wiki/English_unit#Brewery)

Dr. Denn
05-07-2007 04:02 PM ET (US)

- 64 I teach science so I'm getting a kick out of some of these replies. But seriously, questions for mass consumption are often made by educators who are out of their league. The Colorado CSAPs are an example of such a disaster.

Obviously there is a case for all four correct answers. I'm sure the 'correct' answer is liters however because why give two mass answers?

PaulWilliam
05-07-2007 04:01 PM ET (US)

- 63 Of course it is a stupid question. One must consider the source. The only thing that the No Child Left Behind Initiative, and its endless series of "standardized" tests, can ever accomplish is to drag every child down to the lowest common level. At the same time consuming vast quantities of time and money as it destroys the system of public education that enabled this country to become the most powerful on the planet.

Tom Radcliffe
05-07-2007 03:59 PM ET (US)

- 62 The US has traditionally used cm/g metric, so grams might be the best answer there because the favoured unit of volume would be cc rather than litre. As a Canadian physicist I would use kg or liter, because we use the SI version of metric, which prefers those units. Because everyone knows that apple sauce is mostly water, the choice between a unit of mass and a unit of volume is entirely arbitrary.

Regardless of which is the best answer, this is one of the worst questions I can imagine on such a topic.

Kris
05-07-2007 03:56 PM ET (US)

- 61 Edited by author 05-07-2007 03:59 PM
Oddly enough, the kilogram IS the "base" unit. There is a standard object (in France) which is defined to weigh one kilogram. That's the definition of a kilogram. The gram, despite the tricky nomenclature, is derived from the 1 kg object. Originally, this came from the mass of a given volume of water, but there is now an object - a metal cylinder which is the worldly embodiment of the kilogram.

monk
05-07-2007 03:52 PM ET (US)

- 60 More fundamentally: "uses metric" - is this some new-fangled problem-solving methodology? Is she to request the assistance of a band from Toronto/Brooklyn?

lorcatomic
05-07-2007 03:51 PM ET (US)

- 59 the correct answer is b) liter, because the applesauce is a liquid, you must measure in that form

notjafo
05-07-2007 03:46 PM ET (US)

- 58 Even if the instruction is to pick "the best" you can't have a consistent same base transformation without yielding an answer which is subjective - best for what purpose? If her parents own 40,000 acres of orchards then "best" could arguable be metric tonnes. Are feet or yards better at measuring the length of a football field, or a 1/4 mile race?

for the record, the small jar of mott's applesauce in my fridge lists its metric equivalent in grams, but the large jar lists it in kg (it is >1kg). To make this worse, the mayonnaise jar is in liters.....

Brad Templeton
05-07-2007 03:25 PM ET (US)

- 57 Of course, just to confuse her, most of the jars of applesauce in the U.S. stores are marked things like "24 oz" which is probably fluid ounces but could possibly not be. Though I imagine the USDA actually has a rule about it. In Canada I believe they are marked in ml. A litre would be a pretty large jar of applesauce.

Now I actually like questions with multiple correct answers, because the real world is often like that.

lhclubs
05-07-2007 03:24 PM ET (US)

- 56 The American measurement system is pastoral, agrarian. It measures land by the area 1 man can plow in one day. Dry weights by bushels. The heights of horses by hands. Its units are human-scaled and task-specific.

The metric system is mechanical, industrial, and soul-less. All measurements of length are relative to a metal bar in a basement in Paris. All time is relative to the oscillations a radioactive element.

The metric system has its uses in the scientific and medical fields, but its widespread usage is the driving force which has made Europeans susceptible

Kim Scarborough

05-07-2007 03:18 PM ET (US)

Chris

05-07-2007 03:18 PM ET (US)

to and perpetrators of the greatest evils in the history of humanity: fascism, Naziism, communism, trans-Atlantic slavery and the Eurovision Song Contest.

The only appropriate measure of a single-person production of applesauce is the firkin, which can be both a measure of volume, when applied to a liquid or a measure of weight, when applied to a semi-solid. (<http://en.wikipedia.org/wiki/Firkin>)

55 Kilogram isn't the "base" unit, I don't care what anyone says. If it's the "base", then what we call a "gram" would be a "millikilogram". "Gram" is the base, even if a gram is really small.

54 It partly depends on how much applesauce Sarah made. Unless she made under a kilogram she wouldn't use grams, so they're out. But weighing a bucketful of sauce would be more trouble than its worth, so kilograms are out too. Centimetres is ridiculous, so I'd go with litres.

Pour the sauce into 1L tubs and stick them in the freezer until needed. It's an easy calculation to work out the volume based on the number of 1L tubs filled.

That said, the answer is probably kilograms, so I'd probably fail the test.

Brendan

05-07-2007 03:18 PM ET (US)

53 I actually think this is a well-designed question, if what you're testing is standardized test-taking aptitude. The "correct" answer on a standardized test is irrelevant; the answer you want to choose is the one that the test writers think is correct. It's all about putting yourself in the test-writer's shoes and thinking about what knowledge they're trying to test.

In this case, look at the possible responses: one is a unit of volume, one a unit of length and _two_ are units of mass. A rule of thumb in taking standardized tests is that, if two responses share something in common that the other responses don't, the best answer is one of those two. This is because test writers like to test multiple layers of knowledge with a single question. Here, the writer wants to test both the test-taker's knowledge of _kinds_ of units and of the _magnitude_ of units. Knowing the kinds of units will, in the writer's mind, allow the taker to narrow the choice down to grams or kilograms (why the writer thinks that only mass is a proper measure of applesauce quantity is irrelevant; we're just following standard test-writing logic). Next, the choice between grams and kilograms involves knowledge of the magnitudes of these units and their relative suitability for measuring a season's worth of applesauce. Personally, I'd go with kilograms, but I don't know the specifics of Sara's situation.

Of course, if the answer is (B) liters, as I'd think would actually be the best unit of measure for a lot of applesauce, we have to conclude that the test writer not only doesn't know anything about the subject he's writing a test about, but also is bad at writing tests. In that case, all bets are off.

oldschool

05-07-2007 03:16 PM ET (US)

52 the guy from waterloo doesn't really have it correct.

kg is the SI base unit. it is the only SI unit with a prefix.

applesauce is not a liquid. it is a suspension of solid particles in a liquid. it CAN be measured as a liquid, in milliliters because it sometimes is watery enough to fill a measuring cup.

remember though, that 1 cm^3 cubed is equal to 1 milliliter...VOLUME. now, if you had something with a density of 1g/cm^3 then you would have something that would have the same numerical measurement whether in kg's or in mL's.

she is not going to be doing anything with this measurement other than quantifying how much applesauce she made, so it doesn't matter whether she uses a unit of mass or volume or length in a pan, or mason jars. simply doesn't matter.

this is a horrible question.

SauceMan

05-07-2007 03:09 PM ET (US)

the_goob

05-07-2007 03:07 PM ET (US)

51 Sauce = liquid = litres. Simple. And I have a jar to prove it! ;)

50 The correct way to ask this question:

Give the student a big pot of applesauce.

Give the student several different containers of both known and unknown size.

Give the student a metric rule that is flexible.

Give the student a balance scale and full weight set in metric units.

Ask the student to tell you how much applesauce there is, asking for the answer in metric units.

The student is not allowed to eat any of the applesauce.

A question with regards to the problem as originally stated:

Does the question score either 1 or 0? Are there weighted scores for different answers? And how would you weight them? If you are testing for creativity then centimeter might score highest. If you are testing for ability to "think like a test writer" then liter would score highest.

Ned

05-07-2007 03:03 PM ET (US)

49 There is only correct answer to this question, but it is still a bad question. The directions at the beginning probably said "choose the best answer, you may only select one answer"

You might argue "how do you define best?" but there is nothing slightly subjective about this. Centimeter is definitely not appropriate, but that still leaves us with gram, kg, and L. Any of these three answers could be correct in real life, but we are asked to choose the ONE BEST answer. There is no way to distinguish between kg and gram, so neither one of these could possibly be the "BEST" answer, because which one would it be? Therefore it HAS to be L, because that is the only possible consistent answer.

Surlyben

05-07-2007 03:03 PM ET (US)

Rob Cockerham

05-07-2007 03:02 PM ET (US)

DJG

05-07-2007 02:58 PM ET (US)

SI

05-07-2007 02:55 PM ET (US)

Richard

05-07-2007 02:55 PM ET (US)

jodi

05-07-2007 02:55 PM ET (US)

Mike Mi

05-07-2007 02:53 PM ET (US)

zaw

05-07-2007 02:51 PM ET (US)

H Dogg

05-07-2007 02:48 PM ET (US)

steve

05-07-2007 02:47 PM ET (US)

Dave

05-07-2007 02:46 PM ET (US)

Abe Simpson

05-07-2007 02:46 PM ET (US)

Mastering abductive reasoning like this is essential to acing multiple choice tests such as the SATs, because often you can use this abductive logic to find the correct answer even if you do not understand the question (and if it's a bad question then abductive logic is the only way to find the correct answer).

48 Centimeter is obviously the most useful unit to measure it in, since people tend to measure shelf space by length and depth rather than volume.

47 Sara swam a lot this summer. She wants to measure her wet towel. If she uses metric, which unit should she use?

- A) square cm
- B) microacre
- C) kilogram
- D) liter
- E) kilowatt
- F) mole

46 I always buy my applesauce by the gram. In little baggies.

45 "Litre", "centimetre". Even when paying lip service to metric, the US still insists on changing the standard spellings.

Since it's mostly water, 1 kg applesauce is more or less comparable to 1 L, so there's another confuser. I'd lean towards litres, since different batches could have different densities.

Locally, we have a similar useless test we put kids through called the Foundation Skills Assessment. Totally bad for the kids, totally bad for teaching (to get a good school ranking, you have to teach the test).

44 kilogram is the base SI unit of mass, meter is the SI unit of length

"The Kilogram" is held at the Bureau International des Poids et Mesures (BIPM) near Paris and made out of platinum alloy -- an inert metal with a very low vapour pressure.

- a) N gram = 0.001 kilograms
- b) N liter = 1dm^3 "a thousandth of a cubic meter"
- c) Y kilogram is an SI unit.
- d) N centimeter = 0.01 meters

having said that, any of a-c would work for practical purposes.

43 It seems like a silly question, but part of fourth grade math is measurements. The appropriate terms for types of measurement is a big component: volume vs. weight vs. length. Even though any -could- be used, for those that have learned that wet goods are liquids and should be measured by liquid volume it is pretty simply. Most multiple guess tests are not valid for people who are beyond the intellectual level to which the test is geared. (And trust me...as a teacher I have had to give a bunch of these silly things, and ERB's are better than most.)

42 simple question - simple answer. All you have to do is turn your logic ON. As far as applesauce is not a liquid we don't measure it by liters, and not by centimeters. During fall Sara would make definitely more than 100 grams, and it won't be convenient to say "she made 1,000 gram, so of cause we choose C - kilogram and we will say "Sara made 1 kilogram".

41 This a fool-question. all the answers can be correct. i tend to think the volume answer (liter) is correct; but its a fool-question. i have spent more-or-less the last year dealing with metric; i am thoroughly disgusted. (email me i'll explain it).

40 Sara has, presumably, made applesauce on a number of separate, discrete occasions throught the fall. Consequently it is unlikely that either mass of volume are particularly useful measurements.

Mass is particularly useless, as we must also presume that Sara has also consumed some of the applesauce over the fall. Given variable density, it is impossible for her to retrospectively measure the mass of the applesauce she has made.

Volume is slightly more viable, as she can estimate this from the number of jars filled in total over the time period (discounting minor variations in internal volume in the jar-making process). However, by the same token, if the jars are of the same nominal volume (which, again, is likely) then the volume is merely a function of the area of the base times the height. Thus "centimetre" of total height of applesauce jar is just as useful as volume in the probable identical jar scenario.

39 Well, there is no wrong answer. However, litre is spelled wrong, metre is the standard unit of measure for distance (not centimetre), and kilogram is the standard unit of measure for mass (not gram).

38 While an American would never use metric, nobody else would use the American spellings of liter or centimeter, so these two options are just there to trick you.

I think a jar of apple sauce would be sold in grams, but depending how many jars Sara has made kilograms might be better. We need more information to answer the question

37 "The metric system is the tool of the devil! My car gets forty rods to the hogshead and that's the way I likes it!"

Kranky Old Guy

05-07-2007 02:44 PM ET (US)

Mark

05-07-2007 02:43 PM ET (US)

36 There's a very simple answer to this test question: The word "NOT" is missing, as in "...which unit should she NOT use?", and clearly then the answer would be "D - Centimeter". The answers A, B, and C are measures of weight/volume, while D is a measure of length. The question is a misprint.

35 Come on, people. You have to think like a testwriter.

The answer cannot be A or C because then both would be correct.

That leaves B or D.

Volumes are not measured in distances.

The answer is B.

34 For those of you saying you should choose grams over kilograms because grams're the base unit...

http://www.bipm.fr/en/si/base_units/

Surprise! Kilograms are the base unit. Because that makes sense.

33 I'm an education graduate student and I am actually about to go to my assessment class. If I created a test with this question on it I would be asked to remove this. This question is confusing and is just going to trip up students.

It is definitely liters because it is a measure of volume, but I'm not sure if that is really fair for a fourth grader.

32 I agree with others: I think the right answer is clearly (B), but that's based on guessing what the test-writer was thinking. On the other hand, that's a necessary skill for any test-taker; bad questions are far too common.

In practice, a home applesauce production is going to be measured in "jars". Those jars are probably marked by volume. So a home applesauce production will be using a unit of volume, even if commercial applesauce producers use mass units.

The other possibility is that Sarah is a cosmologist and is accustomed to working in geometrized units, in which case she would use "centimeter".

(Re "Newton": lol.)

31 This is a good example of test-fu (which is how bright but lazy people score well without actually trying).

a) and c) are both measures of mass. Since they measure the same thing, they're redundant and can be eliminated. (Rule one of test-fu is that there's only one correct answer).

So you're left with liter and centimeter. Centimeter could make sense but you have to .. imagine. It's not what they want. You're left with b. Liter.

30 Side note to Chris H-C - kilogram *is* the SI base unit of mass.

29 Cool thing to have a classroom discussion about.

Stupid thing to have on a standardized test.

"Is our children learning?"

Dunno, and tests like that aren't going to help.

28 My son had the same type of question on his tests. The goal is to make the child decide which answer is better- a, or c- through reasoning. While a gram would be useful, a kilogram would make measuring a lot easier.

I think what you may have a problem with is not the answers given, but with the applesauce itself- is it a liquid, a solid, or something in between? The subject material should have been easily identified as either this or that, not a mash-up of both.

Of course, that is assuming that 4th graders would even think that applesauce might be a liquid!

27 Also, as an engineer, I think magazine editors and people in the entertainment industry are excellent choices to comment on the validity of a test question designed for fourth graders.

26 Well, in the spirit of gaming the question, I would have to guess that it would be b, since a and c are in essence the same answer and assuming the test creator was rational, I don't think they would create a question that could be answered the same way with two separate, given answers. I suppose you could use d if you had containers of known diameter and were just looking to measure applesauce like you would rainfall. But really, the answer to this is e), which is "This question was not thought through very well."

25 In my experiences, Standardized tests are the biggest waste of American Educational Resources that we have. Because they are weighed so heavily, schools no longer teach children basic knowledge, they teach children how to pass a test.

There are literally schools that test children on their test taking skills. A good friend of mine has a daughter who was given a seventy-page guide to test taking which she had to go through every day and underline, highlight, and take notes on, for two weeks. I read it myself, and I can honestly say the entire thing was repetitive garbage and pseudo-psychology holding together simple concepts like studying that should be common sense notions

MartinF

05-07-2007 02:43 PM ET (US)

Dave LaMorte

05-07-2007 02:43 PM ET (US)

Wim L

05-07-2007 02:42 PM ET (US)

rongenre

05-07-2007 02:42 PM ET (US)

micah

05-07-2007 02:41 PM ET (US)

Jennifer

05-07-2007 02:40 PM ET (US)

Mr Tallywhacker

05-07-2007 02:38 PM ET (US)

beergood

05-07-2007 02:38 PM ET (US)

Omir the Storyteller

05-07-2007 02:37 PM ET (US)

D. Walker

05-07-2007 02:36 PM ET (US)

amongst students.

Things like, "Make sure you get a full nights sleep before a major test" followed by page after page of word-crammed explanation as to why you should sleep properly, eat properly, actually study, etc. These things should be obvious, and damn well shouldn't be the central focus of two weeks of schoolwork. That time would be better spent actually teaching something.

As for the answer in question, the intended answer is of course liter, and centimeter is of course the least viable, but the question is pretty terrible and all the answers are technically correct. The excuse you will likely hear for this question if you ask a teacher or whatnot is that the child is meant to pick the "best" choice.

That's a load of crap, because now you're telling the child to make a judgement call on which answer would some strange test-making person they don't know most likely choose. You can't normally ask a witness in court to speculate about what someone else would think, so why make a child do it for what is meant to be a test of their scholastic aptitude?

The entire matter is completely ridiculous. America is the laughing stock of global education for a reason folks.

Rob
05-07-2007 02:36 PM ET (US)

24 I agree with matt harvest below...since gram and kg are the same, neither can be the answer.

However I also think that is a bad way to set up a test, because you are rejecting answers not based on the merit of the answer itself, but based on the way the test works.

Andrew
05-07-2007 02:35 PM ET (US)

23 First off stay away from the Newton. It changes with the force due to gravity you experience whereas the units in the question stay pretty much constant.

If you are trying to answer the question then you would really need to find out what the apple suace is like. I think the best type is the equivalent of a 'thick cut' recipe which will hold its shape enough not to be level when putting in the contianer. All relishes that come in jars rather than bottles are sold by the gram so the answer ought ot be 'a' with its SI goodness.

Alternatively it would be better to get a cheif exqaminer that is competent in writing questions. The best solution would be, however, to ditch the computer marked multiple-guess answer and replace it with a series of sort answer questions or do something like maths challenge where wrong answers result in marks deducted.

Stu
05-07-2007 02:35 PM ET (US)

22 It's a great question for an adult, because adults know that applesauce is measured as milliliters. But a kid doesn't shop for groceries, and applesauce isn't water. It's chunky enough to be confused as something that could be traditionally weighed as a solid and not a liquid.

Which brings me to this: While arguments can be made for any of the answers, I think we all understand that a test is based on traditional scenarios. Obviously 3 x 4 is always 12, but then so to with other concepts, like: Planes fly high in the air, traditionally. So a kid's test would want as a correct answer "thousands" of feet high, instead of other possible answers, like "hundreds" or whatever. ...just my opinion...

beergood
05-07-2007 02:31 PM ET (US)

21 "This is an excellent question because it is confusing and gets the student to really think about the units of measure. That is the point of learning: to think, not to get the "right" answer. Whoever designed this question was a real education pro."

Yes, the point of learning is to think through options, however, the point of standardized testing (the kind that are oh so important to funding) isn't to learn, but to measure what you have learned, or more questionably, your ability to learn.

John Mark Ockerbloom
05-07-2007 02:30 PM ET (US)

20 Hmmmm... well, it's a useful test question if one of the skills you want to assess is "gaming standardized tests". (Which, actually, isn't a bad thing to know how to do in later grades, when there are more such tests with higher stakes.)

So, first, just as in math class you learn to turn a word problem into an arithmetic problem, and then solve it, here you learn to turn a metric problem into a test-gaming problem, and then solve it. Here's the transformed version:

"This is a question whose answer could be either a unit of mass or a unit of volume. Only one answer is supposed to be correct. What is the correct answer?"

- a. A unit of mass
- b. A unit of volume
- c. A unit of mass
- d. A unit of something else

See, not too hard, is it?

john dunch
05-07-2007 02:30 PM ET (US)

19 gram and kilogram both measure the same thing, mass. an argument could be made for "gram" being the correct answer because that's the basic unit, right?

the real question is, "is applesauce a solid to be measured by mass in grams (or kilograms), or is applesauce a liquid to be measured by volume in liters?" and that mostly depends on how sara made her applesauce.

Chris H-C
05-07-2007 02:29 PM ET (US)

18 Oh, and just to corroborate my earlier supposition of the measurement in Canadian grocery stores:

<http://www.presidentschoice.ca/FoodAndReci...ed/catid/175/type/2>

notamathguy

05-07-2007 02:29 PM ET (US)

17 Well,

Seems like A and C could be correct.

Liter is a measurement of volume
Centimeter is a length measurement

Gram and kilogram are measures of weight, so would be appropriate for approximating how much applesauce was made.

Having dealt with your problem with the question, there is a much more fundamental issue on display here:

- 1) Sara will never make applesauce. She will purchase it from Chinese manufacturers who will make it for a fraction of the cost she could ever make it for. There are only 3 people in the world "make" homemade applesauce, and Sara isn't ever going to be one of them.
- 2) If Sara joined the world's smallest club (i.e., Last Applesauce Makers of America), she would never use a British measurement system. In the United States, we don't use the metric system, and never will. Why? Because the British tried to freakin kill us 200 years ago. That's why.
- 3) There is anti-American bias on display in the question: Why are pounds or ounces not one of the "appropriate" choices? This is an example of a "hate question." Why not ask how many "centimeters" of rope is appropriate for a lynching?
- 4) Sara will most likely place her applesauce into one type of container ... a Mason jar. So, the correct answer is: Mason's

antinous

05-07-2007 02:28 PM ET (US)

beergood

05-07-2007 02:27 PM ET (US)

16 Since it asks how much applesauce she made this fall, it suggests reasonably large scale production, so probably liters. But everybody knows that the unit of measurement for applesauce is "jars".

15 When I was a kid a I remember running into various questionable questions on exams. Whenever I brought one to a teacher's attention I was given the standard out: 'There may be more than one correct answer, you have to choose the best answer'.

I think the best answer would be to have only clearly thought out questions on exams.

In my teachers defense, I was kind of a brat.

Scott

05-07-2007 02:27 PM ET (US)

damien

05-07-2007 02:27 PM ET (US)

14 This is an excellent question because it is confusing and gets the student to really think about the units of measure. That is the point of learning: to think, not to get the "right" answer. Whoever designed this question was a real education pro.

13 "I've shown this question to a movie director, a screenwriter, and a magazine editor, and they think its a lousy question"

I think thats a lousy choice of people to ask about the question. Perhaps an engineer, sientist of mathematician might be more apprpriate. or at least someone with that kind of background.

Still, the question is totally fucked up - you can argue a case for any of them.

some guy

05-07-2007 02:26 PM ET (US)

12 I just looked in my cabinet. I have a 1 pound jar of applesauce, so it appears that applesauce is sold by weight, but in pounds and ounces. The answer is E, none of the above.

Other pertinant questions: Does Sara work at an applesauce factory, or is this applesauce for home consumption? Is applesauce street slang for some sort of drug the kids are using these days? What kind of apples does Sara use for her applesauce? If it is an Americal variety, she would have better results using pounds and ounces, so there is no applesauce lost due to rounding errors.

Chris H-C

05-07-2007 02:25 PM ET (US)

11 I'm a Canuck and a student in the Faculty of Mathematics at the University of Waterloo, so I may be qualified to answer this question.

First off, if you're measuring in metric, the only measures you should consider are ones without prefixes: centimeter [sic] and kilogram are one-hundredth of and one-thousand times their respective measures, metre and gram. This is a little bit of a science-biased opinion, as we were told to convert everything to base SI units before doing anything... Regardless of it perhaps being a useless distinction, it all works out in the end.

So, the only valid plain metric measures are gram and "liter" [sic]. For fluid-like substances that occupy volumes (ie, they don't hold their own shape), the litre should be the best measure. This is the answer you arrive at with or without the kilogram and centimeter [sic] measures being considered (as promised).

...plus, I think in the grocery store they advertise by the ml, so there. :P

Nick Bass

05-07-2007 02:24 PM ET (US)

Alex

05-07-2007 02:24 PM ET (US)

10 i agree, liters are typical for liquids, however this would likely be measured in ounces, grams, or pounds, if it was purchased at a supermarket.

9 Grams. Go to the grocery store and look at any container of apple sauce. It always has the net weight on the front, measured in grams. You want to know the total number of grams you have produced so that you can divide it by the number of grams each container has. You might think using kilos would be better since it will be a very big number, but if you do then you won't be able to do this calculation (without converting back).

8 Simple question. You buy applesauce by weight, not by liquid measurement which rules out liter, and not by length which rules out centimeter. You probably have a lot of applesauce, so a gram is not a practical measurement. Therefore it leaves only kilograms.

Dope dealing helps with this kind of math.

mattharvest
05-07-2007 02:22 PM ET (US)

MrP
05-07-2007 02:21 PM ET (US)

regan wright
05-07-2007 02:20 PM ET (US)

Tim
05-07-2007 02:20 PM ET (US)

Tucker
05-07-2007 02:20 PM ET (US)

Diatryma
05-07-2007 02:20 PM ET (US)

Mark Frauenfelder
05-07-2007 02:14 PM ET (US)

- 7 The answer is "liter". The reasoning is simple: it cannot be gram or kilogram, because the two are equivocal (i.e. they're redundant). That means only "liter" or "centimeter" are options. While you can express volume in cubic centimeters, "centimeters" and "cubic centimeters" aren't the same terms, and so that eliminates centimeters.
- The answer is thus liter.
- 6 They may be going for a "standard" liquid measurement. In that case I would say "B".
- 5 well, typically recipes and the like are written in volume measurement. i'm assuming that you'd want to apply that here, although it's no implied. if it's by weight, it's a), if it's volume, it's a stretch to say b)
- 4 Christ, what a lousy questions. All of them are correct, and not even technically correct, they are all valid.
- Choosing A or C would depend on how much she made, and what kind of measuring devices she has available.
- Choosing B might make sense, except apple sauce isn't totally fluid, and it might be inaccurate compared to a mass measure.
- Choosing D would be fine too depending on what kind of containers she used to store it in.
- 3 I guess they are assuming that the way the question is phrased, one would pick the measurement that gives a plain number, but yes I would say it is a bad question.
- Liter
Centimeter cubed...
- I would vote for either of those.
- 2 E, none of the above. The only appropriate unit is the Newton.
- 1 Edited by author 05-07-2007 02:16 PM
My fourth-grade daughter is taking a series of standardized tests in school this week, called the ERB tests. Her teachers handed out a practice test last week, and when I was going over it, I came across a question in the math section that I think has several possible correct answers:
- =====
Sara wants to measure how much applesauce she made this fall. If she uses metric, which unit should she use?
- A) gram
B) liter
C) kilogram
D) centimeter
=====
- I've shown this question to a movie director, a screenwriter, and a magazine editor, and they think its a lousy question, too. I've even heard a decent argument for d).
- What do you think?

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