

## Broken Into More Specific

**M07.A-N.1.1.1: Apply properties of operations to add and subtract rational numbers, including real-world contexts.**

The statement assumes all students can interpret the diagram provided. Are you trying to test their ability to solve a mathematical problem or interpret the diagram?

**M07.A-N.1.1.2: Represent addition and subtraction on a horizontal or vertical number line.**

I would make the statement more specific, and try to make sure the students understand what is happening in the problem.

It needs to be more specific.

No (Ur dumb.)

Please add these numbers..

**M07.A-N.1.1.3: Apply properties of operations to multiply and divide rational numbers, including real-world contexts; demonstrate that the decimal form of a rational number terminates or eventually repeats.**

Idk that your job (No.)

it should be broken up so the kids understand the material better

**M07.A-R.1.1.1: Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units. Example: If a person walks  $\frac{1}{2}$  mile in each  $\frac{1}{4}$  hour, compute the unit rate as the complex fraction  $\frac{1}{2} / \frac{1}{4}$  miles per hour, equivalently 2 miles per hour.**

Find the volume. Find  $\frac{1}{5}$  of the volume from part a. At what rate did it fill. (Many students have trouble developmentally breaking problems into more than 2 parts in 7th grade. )

Step by step process

The statement is ok. (The sample problem should be broken into parts. You are not just testing on rates but this question is also testing volume.)

The statement is well written. (The example with the complex fraction is well written). The released problems need to be written differently. As is, this provided released problem has too many steps for the students to complete. (The released problem (Simon is filling a tank) has too many steps designed to trip up the students. It is excessive for students to first have to calculate volume (with decimals, and a fraction) and then try to find a unit rate using decimals. )

**M07.A-R.1.1.3: Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.**

Identify the constant of proportionality (unit rate) in tables and graphs.

To confusing

**M07.A-R.1.1.6: Use proportional relationships to solve multi-step ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease.**

I think that if you break up the fraction parts, like one problem at a time, instead of trying to multiply 3 fractions, just do two and then add a second part to the question.

Use proportional relationships to ratios and percent problems. (This sample question is not testing their knowledge of ratios and percents, it is testing their knowledge of fractions.)

Why would u write this. Your kind of dumb (Dddduuuuummmmbbbbbbb :/)

**M07.B-E.1.1.1: Apply properties of operations to add, subtract, factor, and expand linear expressions with rational coefficients. Example 1: The expression  $\frac{1}{2} \cdot (x + 6)$  is equivalent to  $\frac{1}{2} \cdot x + 3$ . Example 2: The expression  $5.3 - y + 4.2$  is equivalent to  $9.5 - y$  (or  $-y + 9.5$ ). Example 3: The expression  $4w - 10$  is equivalent to  $2(2w - 5)$ .**

Apply properties of operations to add, subtract and expand linear expressions. (Students do not understand "factoring" at this age. )

**M07.B-E.2.1.1: Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate. Example: If a woman making \$25 an hour gets a 10% raise, she will make an additional  $\frac{1}{10}$  of her salary an hour, or \$2.50, for a new salary of \$27.50 an hour (or  $1.1 \times \$25 = \$27.50$ ).**

More specific

To much for ONE problem

The statement and example provided with it are fine as written. I feel that the released problem associated with it is too difficult. (The released problem (slow speed and fast speed on a bike) was too wordy and a seventh grade student would not take the time/would not be able to process each of the steps needed to solve the problem. )

**M07.B-E.2.2.2: Solve word problems leading to inequalities of the form  $px + q > r$  or  $px + q < r$ , where  $p$ ,  $q$ , and  $r$  are specific rational numbers, and graph the solution set of the inequality. Example: A salesperson is paid \$50 per week plus \$3 per sale. This week she wants her pay to be at least \$100. Write an inequality for the number of sales the salesperson needs to make and describe the solutions.**

Show Step by step

To much

**M07.C-G.1.1.1: Solve problems involving scale drawings of geometric figures, including finding length and area.**

Solve problems involving scale drawings of geometric figures. Find area and length given the new information (There is too much for students to do within this standard. If the problems were given as open ended responses that first asked for scale information then the second part of the problem should deal with the area and length.)

Students will not understand what you are asking them to find.

This should be three steps for a twelve year old. (Or, this problem should NOT be a test question. It would be a good problem to work through in school. )

What is the need to combine the question technically into parts?

**M07.C-G.1.1.2: Identify or describe the properties of all types of triangles based on angle and side measures.**

Do you want students to know and understand equilateral, isosceles, scalene, right, obtuse and acute? Or do you want them to know such theorems as side-angle-side?

**M07.C-G.1.1.4: Describe the two-dimensional figures that result from slicing three-dimensional figures. Example: Describe plane sections of**

**right rectangular prisms and right rectangular pyramids.**

Dumb,dumb,dumb, duuummmbbb (U should lower our taxes.. Lol ur not that nice )

**M07.C-G.2.1.1: Identify and use properties of supplementary, complementary, and adjacent angles in a multistep problem to write and solve simple equations for an unknown angle in a figure.**

Wtf was that?! (U should make the school day shorter.... Because it makes me want to die)

**M07.D-S.1.1.1: Determine whether a sample is a random sample given a real-world situation.**

Think

**M07.D-S.1.1.2: Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Example 1: Estimate the mean word length in a book by randomly sampling words from the book. Example 2: Predict the winner of a school election based on randomly sampled survey data.**

How many votes will the first place finisher get? How many votes with the second place finisher get? (Lead them to the final answer with questions.)

**M07.D-S.3.2.3: Find probabilities of independent compound events using organized lists, tables, tree diagrams, and simulation.**

This state is dumb (I'm moving to Florida :))

## **Different Grade**

**M07.A-N.1.1.1: Apply properties of operations to add and subtract rational numbers, including real-world contexts.**

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**M07.A-N.1.1.2: Represent addition and subtraction on a horizontal or**

vertical number line.

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**M07.A-N.1.1.3: Apply properties of operations to multiply and divide rational numbers, including real-world contexts; demonstrate that the decimal form of a rational number terminates or eventually repeats.**

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**M07.A-R.1.1.1: Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units. Example: If a person walks  $\frac{1}{2}$  mile in each  $\frac{1}{4}$  hour, compute the unit rate as the complex fraction  $\frac{1}{2} / \frac{1}{4}$  miles per hour, equivalently 2 miles per hour.**

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**M07.A-R.1.1.2: Determine whether two quantities are proportionally related (e.g., by testing for equivalent ratios in a table, graphing on a coordinate plane and observing whether the graph is a straight line through the origin).**

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**M07.A-R.1.1.3: Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.**

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**M07.A-R.1.1.4: Represent proportional relationships by equations.**

**Example: If total cost  $t$  is proportional to the number  $n$  of items purchased at a constant price  $p$ , the relationship between the total cost and the number of items can be expressed as  $t = pn$ .**

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**M07.A-R.1.1.5: Explain what a point  $(x, y)$  on the graph of a proportional relationship means in terms of the situation, with special attention to the points  $(0, 0)$  and  $(1, r)$ , where  $r$  is the unit rate.**

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**M07.A-R.1.1.6: Use proportional relationships to solve multi-step ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease.**

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**M07.B-E.1.1.1: Apply properties of operations to add, subtract, factor, and expand linear expressions with rational coefficients. Example 1: The expression  $\frac{1}{2} \cdot (x + 6)$  is equivalent to  $\frac{1}{2} \cdot x + 3$ . Example 2: The expression  $5.3 - y + 4.2$  is equivalent to  $9.5 - y$  (or  $-y + 9.5$ ). Example 3: The expression  $4w - 10$  is equivalent to  $2(2w - 5)$ .**

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**M07.B-E.2.1.1: Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate. Example: If a woman making \$25 an hour gets a 10% raise, she will make an additional  $\frac{1}{10}$  of her salary an hour, or \$2.50, for a new salary of \$27.50 an hour (or  $1.1 \times \$25 = \$27.50$ ).**

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**M07.B-E.2.2.1: Solve word problems leading to equations of the form  $px +$**

$q = r$  and  $p(x + q) = r$ , where  $p$ ,  $q$ , and  $r$  are specific rational numbers.

**Example:** The perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?

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**M07.B-E.2.2.2:** Solve word problems leading to inequalities of the form  $px + q > r$  or  $px + q < r$ , where  $p$ ,  $q$ , and  $r$  are specific rational numbers, and graph the solution set of the inequality. **Example:** A salesperson is paid \$50 per week plus \$3 per sale. This week she wants her pay to be at least \$100. Write an inequality for the number of sales the salesperson needs to make and describe the solutions.

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**M07.B-E.2.3.1:** Determine the reasonableness of answer(s) or interpret the solution(s) in the context of the problem. **Example:** If you want to place a towel bar that is  $9 \frac{3}{4}$  inches long in the center of a door that is  $27 \frac{1}{2}$  inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.

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**M07.C-G.1.1.1:** Solve problems involving scale drawings of geometric figures, including finding length and area.

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**M07.C-G.1.1.2: Identify or describe the properties of all types of triangles based on angle and side measures.**

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**M07.C-G.1.1.3: Use and apply the triangle inequality theorem.**

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**M07.C-G.1.1.4: Describe the two-dimensional figures that result from slicing three-dimensional figures. Example: Describe plane sections of right rectangular prisms and right rectangular pyramids.**

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**M07.C-G.2.1.1: Identify and use properties of supplementary, complementary, and adjacent angles in a multistep problem to write and solve simple equations for an unknown angle in a figure.**

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**M07.C-G.2.1.2: Identify and use properties of angles formed when two parallel lines are cut by a transversal (e.g., angles may include alternate interior, alternate exterior, vertical, corresponding).**

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**M07.C-G.2.2.1: Find the area and circumference of a circle. Solve problems involving area and circumference of a circle(s). Formulas will be provided.**

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**M07.C-G.2.2.2: Solve real-world and mathematical problems involving area, volume, and surface area of two and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. Formulas will be provided.**

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**M07.D-S.1.1.1: Determine whether a sample is a random sample given a real-world situation.**

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**M07.D-S.1.1.2: Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Example 1: Estimate the mean word length in a book by randomly sampling words**

from the book. **Example 2: Predict the winner of a school election based on randomly sampled survey data.**

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**M07.D-S.2.1.1: Compare two numerical data distributions using measures of center and variability. Example 1: The mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team. This difference is equal to approximately twice the variability (mean absolute deviation) on either team. On a line plot, note the difference between the two distributions of heights. Example 2: Decide whether the words in a chapter of a seventh grade science book are generally longer than the words in a chapter of a fourth grade science book.**

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**M07.D-S.3.1.1: Predict or determine whether some outcomes are certain, more likely, less likely, equally likely, or impossible (i.e., a probability near 0 indicates an unlikely event, a probability around  $\frac{1}{2}$  indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event).**

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**M07.D-S.3.2.1: Determine the probability of a chance event given relative**

frequency. Predict the approximate relative frequency given the probability. Example: When rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times but probably not exactly 200 times.

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**M07.D-S.3.2.2: Find the probability of a simple event, including the probability of a simple event not occurring. Example: What is the probability of not rolling a 1 on a number cube?**

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**M07.D-S.3.2.3: Find probabilities of independent compound events using organized lists, tables, tree diagrams, and simulation.**

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**Rewritten**

**M07.A-N.1.1.1: Apply properties of operations to add and subtract rational numbers, including real-world contexts.**

Just make the question clearer

This is not the best way to install a shelf. It will require a lot of hardware for support. If our

children are supposed to use real world examples, they shouldn't be asked to use three pieces of wood measured in units that are not used at local hardware stores. (Not real world. )

Use inches! (The metric system is not how we measure in the United States so why use it in a math problem. We have the customary system of measurement.)

**M07.A-N.1.1.2: Represent addition and subtraction on a horizontal or vertical number line.**

Corrine plans to spend \$20 on a shirt, \$13 on dinner, and \$4 on a bus ticket. She will earn a total of \$30 babysitting. How much more does she need to earn to be able to purchase everything she wants? (The navigation on the number line is confusing visually to a majority of students.)

fewer numbers.

Get rid of the diagram. (The diagram makes the problem much more confusing for the students!!)

represent addition and subtraction by some method (number line, color chips, picture) (students all learn in different methods why force them to one method)

The diagram is confusing (7th grade students can complete this concept without the use of a number line. )

Using the algorithm (This is a simple problem WAY over-complicated by the use of a number line. A child should be able to just answer this question. Problem like this are why children are REALLY starting to hate math. )

**M07.A-N.1.1.3: Apply properties of operations to multiply and divide rational numbers, including real-world contexts; demonstrate that the decimal form of a rational number terminates or eventually repeats.**

Delete the number lines. (Students should not be forced into using number lines. If they can solve it without the number lines, they should get credit.)

Solve for....

Solve the equation: \_\_\_\_\_ (In higher math, words like that are not used for simple equations. )

**M07.A-R.1.1.1: Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units. Example: If a person walks  $\frac{1}{2}$  mile in each  $\frac{1}{4}$  hour, compute the unit rate as the complex fraction  $\frac{1}{2} / \frac{1}{4}$  miles per hour, equivalently 2 miles per hour.**

After 2 minutes, Simon has filled the tank so that the volume is 0.05 cubic meters. What is the rate, in cubic meters per minute, at which Simon is filling up the water in the tank? (The problem is supposed to focus on computing rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measure in like or different units. The students must be able to compute volume as well as find the rate. This problem needs to focus on one piece of eligible content to truly test this standard/skill. )

After 2 minutes, the water that Simon filled up was 1.2 of it's height. What is the rate in cubic meters?

From me, I find the question very confusing, so I think that if you would try to explain the problem more and go into more depth, but without giving away the answer, it would make more sense so then then students would know how to solve the question.

The example question is ok, but the sample question is way to involved - the idea of  $\frac{1}{5}$  of the volume over complicates things - I feel like saying the rectangular prism can be filled in 10 minutes and asking for the volume per minute would be more reasonable - give the rectangular prism fractional dimensions if you are really hoping for proof of fraction proficiency.

Better suited for a Science class or older child. (My children have been in double advanced math. This is a very complicated problem based on what the children have been taught up until 7th grade. They are better off solving for  $\frac{1}{5}$ th of a volume for a few units and then asked to make the leap of incorporating time. My guess is most non-Science adults could not do this problem.)

**M07.A-R.1.1.2: Determine whether two quantities are proportionally related (e.g., by testing for equivalent ratios in a table, graphing on a coordinate plane and observing whether the graph is a straight line through the origin).**

Ask the question as it relates to earnings.

Janet is paid the same amount for each hour she works at her part time job. Using the graph, how many dollars per hour does Janet earn at her part time job? (The way this is written is overly complicated, and if written the way presented is hopefully preceded by a lot of discussion about the meaning of "models the relationship between" and "proportionally related". My children spend a TREMENDOUS amount of time trying to figure out what the question is asking. I often have to interpret it for them.)

Remove the graphing portion of the statement. The graphing portion is a little above the 7th grade level.

Students need to know understand proportionality better with respect to setting two ratios equal to each other and seeing if they are equal using cross-products. The concept of having to go through (0,0) is very confusing for 7th graders. Some of them get it, but who is going to ever take real data, graph it and see if it goes through the origin? Again, it is so much easier to cross multiply and who in the real world is going to graph points??? (I've been teaching this for 13 years, and this new concept of having to go through the origin to prove proportionality is not something people are going to do or take the time to do. People need to know how to solve problems more efficiently. )

What is this (I'm bored.)

**M07.A-R.1.1.3: Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.**

Question is fine, but use unit rate. Constant of proportionality is confusing to students reading below grade level.

**M07.A-R.1.1.4: Represent proportional relationships by equations.**

**Example: If total cost  $t$  is proportional to the number  $n$  of items purchased at a constant price  $p$ , the relationship between the total cost and the number of items can be expressed as  $t = pn$ .**

Make it more understandable

Not real world for a 7th grader. Question is confusing. Also, the question should be: What equation describes the cost of the child ticket ( $c$ )? (I think some children would get this incorrect because the "natural way to think about this problem" is  $4 \times C = A$ . Since these children didn't take algebra yet, they have to think about a lot of things before they answer this question with relation to  $C = 1/4 A$ . (Baby-steps is how people learn to love math.) Also, when my kids get this type of question they ask me questions like, "Why are there three price ranges?" "Why do I need to solve this three times for the same equation?" It confuses them and makes them think there is a trick. Plus, the word "proportional" is being thrown in there again. Hopefully it will be introduced at some point before 7th grade (because my child hasn't seen it before this year.)

**M07.A-R.1.1.5: Explain what a point  $(x, y)$  on the graph of a proportional relationship means in terms of the situation, with special attention to the points  $(0, 0)$  and  $(1, r)$ , where  $r$  is the unit rate.**

...How much does Rachel have to pay when she exceeds her plan by one minute. (Over complicated question)

The graph should be marked so students know what point is graphed. or graph should be made larger so students can tell that  $\frac{1}{4}$  is graphed.

What does the y-coordinate represent when the x coordinate is 4? (The values that the students are finding should be whole numbers not fractional pieces. )

**M07.A-R.1.1.6: Use proportional relationships to solve multi-step ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease.**

change  $\frac{3}{7}$  (Since when is baking done with  $\frac{3}{7}$  of a cup?)

It is more worthwhile to ask questions about simple interest, tax, and percents in general without forcing students to use proportional relationships.

The sample questions doesn't have anything to do with simple interest, tax, markups, and markdowns, gratuities and commissions, fees, percent increase and decrease.

This question needs rewritten in terms of applying it to real-world data. Whoever wrote this problem obviously does no baking! There is no such thing as  $\frac{3}{7}$ ths of a cup. Somebody find me this measuring device and I will agree with this question. Also, nobody would follow a recipe in this manner. We want to teach kids real life lessons, then get the facts straight!

Use practical measurements. (Using sevenths as a measurement . . . who has a seventh cup measurement in their kitchen. )

**M07.B-E.1.1.1: Apply properties of operations to add, subtract, factor, and expand linear expressions with rational coefficients. Example 1: The expression  $\frac{1}{2} \cdot (x + 6)$  is equivalent to  $\frac{1}{2} \cdot x + 3$ . Example 2: The expression  $5.3 - y + 4.2$  is equivalent to  $9.5 - y$  (or  $-y + 9.5$ ). Example 3: The expression  $4w - 10$  is equivalent to  $2(2w - 5)$ .**

did not provide the answer

It should state how many of each package he bought

There is a paragraph of writing that confuses the students when all you want them to do is simplify the expression. Delete the writing! Again, nobody would set this up to figure out this type of problem anyways. Get problems that have real meaning! Don't try to confuse the kids when you just want them to do one thing! How about picking real math teachers in the field to write these questions?

**M07.B-E.2.1.1: Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate. Example: If a woman making \$25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or \$2.50, for a new salary of \$27.50 an hour (or  $1.1 \times \$25 = \$27.50$ ).**

Make the race distance divisible by 5.

The question should be more related to percentages not fractions (You are testing too many things in one problem, with the fractions, conversion and portions. The sample question is not in anyway related to the example under the standard above. )

**M07.B-E.2.2.1: Solve word problems leading to equations of the form  $px + q = r$  and  $p(x + q) = r$ , where  $p$ ,  $q$ , and  $r$  are specific rational numbers.**

**Example: The perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?**

Step by step

**M07.C-G.1.1.1: Solve problems involving scale drawings of geometric figures, including finding length and area.**

Provide the formula for the cylinders.

**M07.C-G.1.1.3: Use and apply the triangle inequality theorem.**

If you have side  $AC+BC = 6+11$ , answer 17 is not correct. (The triangle inequality theorem states that any side of a triangle is always shorter than the sum of the other two sides. If you have side  $AC+BC = 6+11$ , answer 17 is not correct.)

**M07.C-G.1.1.4: Describe the two-dimensional figures that result from slicing three-dimensional figures. Example: Describe plane sections of right rectangular prisms and right rectangular pyramids.**

a block of wood in the shape of a pyramid...kids are automatically hearing block and thinking of a cube. this needs to say he has a piece of wood in the shape of a pyramid. but why are we so worried about what shape he gets? this is very difficult for students to do without having the object in their hands to manipulate!

A picture to accompany the word problem would be helpful to the child with reading difficulties.

The statement is fine. The released item (Lou has a block of wood in the shape of a square

pyramid) needs a picture to help the student start visualizing the question. (A picture needs to be provided with the released item (all of the math vocabulary terms will be too much for a seventh grade student to handle...it seems that many seventh grade students have problems with visualization).)

To wordy

**M07.C-G.2.2.1: Find the area and circumference of a circle. Solve problems involving area and circumference of a circle(s). Formulas will be provided.**

Didn't understand any of that. (Do u actually read these? Or are u just lying to Pennsylvania again?)

This is confusing. A circle should be drawn and the diameter should be given. Then the child should be asked what the circumference is. (If I were a child I would ask what a wire have to do with a lampshade and get confused. Keep it simple so kids learn. )

**M07.C-G.2.2.2: Solve real-world and mathematical problems involving area, volume, and surface area of twoand three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. Formulas will be provided.**

A visual should be included. (Students are able to understand when they can see a visual)

Ask how much material is needed to cover 5 face. (Too many steps to get to the answer.)

Statement ok. (A diagram would be great.)

The statement is fine, my issue is with the released item (Shannon has several cubes). (Again, there are too many steps being required of the students in this multiple choice released item (Shannon has several cubes). If there are that many different steps involved, the problem should also have partial credit (I think this released item would be much better suited to an open-ended problem).)

This would be a fantastic open ended question. As a multiple choice question it is so easy for a student to have all the concepts correct but because of one little computational mistake then get the whole thing wrong.

Um, why would Shannon be doing this? We want to make these problems real world, but who would cover huge blocks with foil? And all but one side??? I turned it into Christmas presents that she could not wrap the bottom, but then again, you would never be able to use the exact amount of square feet to wrap unless you cut out each side and taped it on...there would always

be overlap when wrapping something! Have you ever wrapped a present? Do you cut out each side and paste it on??

**M07.D-S.2.1.1: Compare two numerical data distributions using measures of center and variability. Example 1: The mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team. This difference is equal to approximately twice the variability (mean absolute deviation) on either team. On a line plot, note the difference between the two distributions of heights. Example 2: Decide whether the words in a chapter of a seventh grade science book are generally longer than the words in a chapter of a fourth grade science book.**

Students do not know "mean absolute deviation"

**M07.D-S.3.2.1: Determine the probability of a chance event given relative frequency. Predict the approximate relative frequency given the probability. Example: When rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times but probably not exactly 200 times.**

they will definitely not pick A. this question will trick probably every student you test. Need a different probability question totally.

You need to reword and simplify the question. There is more information in the statement, than there is needed to answer the question correctly

**M07.D-S.3.2.2: Find the probability of a simple event, including the probability of a simple event not occurring. Example: What is the probability of not rolling a 1 on a number cube?**

All are OK except the correct answer. (Two many selections leads to self doubt, which leads to low-self confidence. )

**M07.D-S.3.2.3: Find probabilities of independent compound events using organized lists, tables, tree diagrams, and simulation.**

Make the numbers smaller (Concept is fine but room for error with the large numbers and students will shut down. )

## Should Be Deleted

### **M07.A-N.1.1.1: Apply properties of operations to add and subtract rational numbers, including real-world contexts.**

Pee and poop

The diagram is not very clear and concise, the students will not understand it.

### **M07.A-N.1.1.2: Represent addition and subtraction on a horizontal or vertical number line.**

Pee and poop

For many students number lines actually become a confusing tool especially for problems such as 2 minus a negative 4. Number lines are ok to introduce the concept of adding and subtracting integers but lose their effectiveness beyond that.

I don't like it

I think that this is a confusing statement and question.

It's too hard.

Many students understand addition and subtraction using other methods, such as counters, rules, etc. Oftentimes the number line confuses them even though they may understand the overall concept.

My students already had the value calculated without the number line. The number line just confused them! Why do we want kids adding on number lines in 7th grade? Nobody is going to draw a number line to figure out a problem. Nobody! I've asked so many people about this and they agree.

Not everybody can think in a visual manner. Students see that the problem takes up a whole page and panic (adding to test taking anxiety). Most students would guess and move on. I gave this released item to my class and less than 20% got the correct answer without guessing.

Students could do this problem easily without using the number line. Why do they need to show how it is solved on a number line?

The number lines are very confusing to follow.

Using number lines to add integers is a strategy or technique. All students don't use this way to

solve problems and this can be very confusing!!

**M07.A-N.1.1.3: Apply properties of operations to multiply and divide rational numbers, including real-world contexts; demonstrate that the decimal form of a rational number terminates or eventually repeats.**

Pee and poop

I don't like it

**M07.A-R.1.1.1: Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units. Example: If a person walks  $\frac{1}{2}$  mile in each  $\frac{1}{4}$  hour, compute the unit rate as the complex fraction  $\frac{1}{2} / \frac{1}{4}$  miles per hour, equivalently 2 miles per hour.**

Pee and poop

I don't like it

I think it is to hard for this grade level.

You are dumb and should move to a different state. :)

**M07.A-R.1.1.2: Determine whether two quantities are proportionally related (e.g., by testing for equivalent ratios in a table, graphing on a coordinate plane and observing whether the graph is a straight line through the origin).**

Pee and poop

Many 7th graders are taking Pre-Algebra, and I have not yet seen a Pre-Algebra textbook that teaches proportional relationships this way.

Shoo fly

**M07.A-R.1.1.3: Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.**

Pee and poop

Be gone peasant

Please see above.

Students have not had any experience graphing lines to this point, and 8th grade content focuses much more on graphing lines, creating tables, solving functions etc. Having to teach constants of proportionality (which are not needed to solve unit rate) take away from valuable time needed to teach real-life opportunities to use ratios, rates and proportions

**M07.A-R.1.1.4: Represent proportional relationships by equations.**

**Example: If total cost  $t$  is proportional to the number  $n$  of items purchased at a constant price  $p$ , the relationship between the total cost and the number of items can be expressed as  $t = pn$ .**

Pee and poop

Never will help in life.

Peasant\*

Please see above.

This should be an 8th grade topic

Eighth grade material has a stronger focus on functions and equations. This question would be better suited to 8th grade, as students have experience with function tables and graphing functions and equations.

**M07.A-R.1.1.5: Explain what a point  $(x, y)$  on the graph of a proportional relationship means in terms of the situation, with special attention to the points  $(0, 0)$  and  $(1, r)$ , where  $r$  is the unit rate.**

Pee and poop

I don't like it

Most graphing is done in 8th grade first of all. Second when dealing with unit rates and such slope is used most not coordinate points.

Please see above.

Students can calculate unit rates on a graph. Students do not understand the complexity of these types of questions. That's higher level thinking and their minds aren't mature enough to explain that.

Seventh grade students have not experienced graphing lines; 8th grade focuses on graphing

lines, particularly of proportional relationships. Eighth grade students would understand the axes of the graph and the slope of the line better than 7th grade students.

**M07.A-R.1.1.6: Use proportional relationships to solve multi-step ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease.**

Pee and poop

I wanna be an engineer

Not a normal recipe adjustment. This would never happen in real life. Hopefully the children have learned some solid fundamentals before being asked to solve this relatively easy math problem, because the reading and backward way of thinking may be too complicated for their developmental age. Children are not given enough testing time to interpret these goofy questions that we would do for fun as kids.

Students can calculate proportions but not multi-step proportions at this age level. Too complex of a question.

Why do you have to make these so complicated for no reason?

**M07.B-E.1.1.1: Apply properties of operations to add, subtract, factor, and expand linear expressions with rational coefficients. Example 1: The expression  $\frac{1}{2} \cdot (x + 6)$  is equivalent to  $\frac{1}{2} \cdot x + 3$ . Example 2: The expression  $5.3 - y + 4.2$  is equivalent to  $9.5 - y$  (or  $-y + 9.5$ ). Example 3: The expression  $4w - 10$  is equivalent to  $2(2w - 5)$ .**

Pee and poop

First of all, the text supporting the equation is not necessary and confusing for a 7th grader. Secondly, this is basic algebra and is much easier to learn when some algebraic fundamentals are taught to the children. I am tired of home-schooling my children! (My 7th grade math student can solve this because I taught her.) If this problem is being presented it should say: simplify the following:

Get rekt

**M07.B-E.2.1.1: Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate. Example: If a woman making \$25 an hour gets a 10% raise, she will make an additional 1/10 of**

her salary an hour, or **\$2.50**, for a new salary of **\$27.50** an hour (or  $1.1 \times \$25 = \$27.50$ ).

Pee and poop

Although not a difficult concept, some children do not understand what a warm-up and cool-down period is -- especially ones that do a lot of math. This will require questions to parents. Also, the child has to make the leap that  $\frac{4}{5}$  of the TOTAL distance is used for fast and  $\frac{1}{5}$ th is used for slow. This is somewhat confusing because of the way it is written. The  $\frac{1}{3}$ rd is actually  $\frac{1}{3}$ rd of  $\frac{1}{5}$ th of 44.5 miles. If a problem like this is asked it should be done in two parts for 12 year olds: 1) what portion is slow? 2)if  $\frac{1}{3}$  of that distance is warm up, what distance will be cool-down? Also, what is wrong with using 45 miles as the total distance. The number is easy to look at and work with and there will be less estimating. (Estimating is NOT used in higher math.) These small details make kids not like math.

Fj

**M07.B-E.2.2.1: Solve word problems leading to equations of the form  $px + q = r$  and  $p(x + q) = r$ , where  $p$ ,  $q$ , and  $r$  are specific rational numbers.**

**Example: The perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?**

I don't like it

What my children are currently taught in 7th grade math are "strategies" to solve a problem. I solved this problem with a two-step process, which is how I would show my 7th graders how to solve this problem. I would NEVER do an algebraic equation for something so simple (over-complicates). I am good at math. Part of being good at math is learning the fundamentals at an early age. This is not a fundamental and 7th graders are young.

Wording way to confusing!

**M07.B-E.2.2.2: Solve word problems leading to inequalities of the form  $px + q > r$  or  $px + q < r$ , where  $p$ ,  $q$ , and  $r$  are specific rational numbers, and graph the solution set of the inequality. Example: A salesperson is paid \$50 per week plus \$3 per sale. This week she wants her pay to be at least \$100. Write an inequality for the number of sales the salesperson needs to make and describe the solutions.**

I don't like it

I have seen problems like this with my child's homework and on tests. The amazing thing is that this is a complex problem and they are presented with this BEFORE they know the fundamentals of percentages. This type of problem should NOT be included in a test unless it is for placement.

The inequality signs are set up wrong. Since they are all greater than signs, the last two choices could work. Even had other math teachers agree with me!

**M07.B-E.2.3.1: Determine the reasonableness of answer(s) or interpret the solution(s) in the context of the problem. Example: If you want to place a towel bar that is  $9 \frac{3}{4}$  inches long in the center of a door that is  $27 \frac{1}{2}$  inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.**

Estimates should not be test questions, they are strategies for determining accuracy. Children should not be "graded" on their ability to estimate in a math class.

I don't like it

It is just too difficult to test estimation skills with a standardized test. Leave that to a verbal or written explanation in class.

**M07.C-G.1.1.1: Solve problems involving scale drawings of geometric figures, including finding length and area.**

How about giving the kids something they can physically make and cut in half instead of trying to get them to picture it in their heads? We have to give them manipulatives when teaching cross sections, yet they get none when come testing time? Why are cross sections so important anyways? Who would ever be cutting something like this in half and have to find the area of the result??? There are so many objects that can be cut in half, how do we teach this effectively to kids when there are endless possibilities. Again, if you want hands on learning, then give them the materials to do this instead of a multiple choice question!

I don't like it

Students do not know what a "cross section" is. They know how to compute the volume of cylinders.

The problem is irrelevant to a 7th grader.

Too complex and the diagram is not clear

Wording way too confusing

Too many steps are being asked of the students. I feel that students at this level would not be able to interpret the "vertical axis" that is mentioned in the released item (two stacked cylinders). I feel that the released item would be more well suited to a high school geometry class (in which students have had more experience with axes, volumes, and conversions of units). Seventh grade students would have a difficult time visualizing the picture to know that they are looking at the cross section...and would not make the conversion from centimeters to inches at the proper time in their work,

using scale drawings to find missing side lengths is fine, but then adding in areas of cross sections is too much for a 7th grade student

**M07.C-G.1.1.2: Identify or describe the properties of all types of triangles based on angle and side measures.**

I don't like it

**M07.C-G.1.1.3: Use and apply the triangle inequality theorem.**

Fun class exercise, but should not be tested on this. This is not test a child's knowledge of math.

I don't like it

I have no idea how to figure this out, couldn't it be any number?

**M07.C-G.1.1.4: Describe the two-dimensional figures that result from slicing three-dimensional figures. Example: Describe plane sections of right rectangular prisms and right rectangular pyramids.**

Fun class exercise, but if children are supposed to be able to use several strategies for math, then they should be able to use manipulatives for this. This looks like an OLSAT question.

I don't like it

This question and/or questions like it are too abstract for the typical 7th grade student.

Too many instructions and too much visualization necessary. ESL students will get this wrong because of dependence on English and reading of instructions. Low-level readers will similarly get this wrong. Also, this is difficult to teach because of its dependency on visual-spatial skills.

What is a square pyramid? This very confusing.

**M07.C-G.2.1.1: Identify and use properties of supplementary, complementary, and adjacent angles in a multistep problem to write and solve simple equations for an unknown angle in a figure.**

I don't like it

**M07.C-G.2.1.2: Identify and use properties of angles formed when two parallel lines are cut by a transversal (e.g., angles may include alternate interior, alternate exterior, vertical, corresponding).**

I don't like it

These children are being asked to make leaps that they may not be developmentally appropriate based on what they are taught at school. I can easily answer this question because I took Algebra and fully understand what a variable is and how the angle in the problem is being represented by an expression (plus I have taken Geometry). Schools need to spend less time on these complex problems in 7th grade and spend more time teaching fundamentals (not discovering them, but helping children understand them).

**M07.C-G.2.2.1: Find the area and circumference of a circle. Solve problems involving area and circumference of a circle(s). Formulas will be provided.**

I don't like it

**M07.C-G.2.2.2: Solve real-world and mathematical problems involving area, volume, and surface area of two and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. Formulas will be provided.**

Fun for a puzzle book, but far too time consuming for a test, classwork, or homework. A child who knows how to determine the surface area of a cube has several areas to make a mistake with this problem -- it is potentially VERY frustrating.

I don't like it

**M07.D-S.1.1.1: Determine whether a sample is a random sample given a real-world situation.**

I don't like it

I think that a child may get confused by these answers and end up over-thinking -- time spent on math would be better spent on a problem that teaches fundamentals with numbers not words.

what is the importance whether the sampling was "random"? Give the student a question to calculate the probability and he can do so.

Wording does not make sense!

**M07.D-S.1.1.2: Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Example 1: Estimate the mean word length in a book by randomly sampling words from the book. Example 2: Predict the winner of a school election based on randomly sampled survey data.**

I don't like it

These types of test questions are difficult for 7th graders. Tests are in relatively short class periods and if a child gets it wrong, it will lower their self confidence. Unless they have had a lot of practice on this exact type of problem, most kids will likely get this wrong because the ratio is  $20/50 = x/800$  and an initial reaction might be a child would set up the ratio as  $20/100$ . Plus, there are also 2 parts to this problem, which is over-complicated for most 12 year old brains on a test. (My child just started getting nervous this year 2014/2015 because she feels like she is not being taught things. I think it's called "Discovery Math". She used to be good at math and love it, and she REALLY benefits from being taught. It is very sad. I was taught math too, was VERY good at it, and loved it. Now that I have time, I enjoy Discovering math and using all of the tools and fundamentals that I learned to solve math problems that my 7th grader is being asked to solve.)

**M07.D-S.2.1.1: Compare two numerical data distributions using measures of center and variability. Example 1: The mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team. This difference is equal to approximately twice the variability (mean absolute deviation) on either team. On a line plot, note the difference between the two distributions of heights. Example 2: Decide whether the words in a chapter of a seventh grade science book are generally longer than the words in a chapter of a fourth grade science book.**

I don't like it

Too confusing. Kids should be doing more equations and less reading. Plus, different kids use different types of logic and they will not likely be able to explain themselves if they get it "wrong".

Too difficult for a 7th grader.

Too many complex ideas in one question. Ask one question to calculate.

Comparing data using measures of central variability is a very difficult concept for 7th graders. Also I would like to meet the person who thinks a seventh grader needs to know how to find mean absolute deviation. There are stat students who can not comprehend these concepts. To fully understand MAD you also need to understand standard deviation.

While rewriting our curriculum, 4 college educated math teachers had to look up the definition of measures of variability and mean absolute deviation. This material would be much more suited to a high school stats class...in which students have an actual real-life chance of needing this material. I would chance to guess that most middle school math texts do not have a section covering this material. More items should be released to give students a fighting chance of knowing how to attempt these problems. As a recent college educated teacher (graduating in the last 5 years), I have never seen this material before, either taught to me in my school days in PA or in my college level curriculum. The released item is not difficult...once all of the material is read. I think that the problem is too wordy and a seventh grade student would take a guess instead of take the time to read the material.

**M07.D-S.3.1.1: Predict or determine whether some outcomes are certain, more likely, less likely, equally likely, or impossible (i.e., a probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event).**

Does not measure a "math" ability.

I don't like it

Somewhat ambiguous. A child may have a reason for choosing one that is not what the teacher is looking for, but makes sense to the child. Let children discover math through solving equations and getting concrete answers.

Why would you put this question . . . .

**M07.D-S.3.2.1: Determine the probability of a chance event given relative frequency. Predict the approximate relative frequency given the probability. Example: When rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times but probably not exactly 200 times.**

Confusing

I don't like it

There is too much information provided, too many different tables to look at and analyze, give one table to analyze and then have them choose an answer.

This takes a lot of thought for a scientific brain. The "what ifs" are piling up. At this stage in a child's mathematical development, they should be solving more direct problems. This type of work does not stick with children. More concrete work please!

**M07.D-S.3.2.2: Find the probability of a simple event, including the probability of a simple event not occurring. Example: What is the probability of not rolling a 1 on a number cube?**

By the way, I haven't read any of these. I just like red so I'm making them all red, so...

**M07.D-S.3.2.3: Find probabilities of independent compound events using organized lists, tables, tree diagrams, and simulation.**

SUCK BRICK KID

This is far too complex and will take too long for homework, school work, or a test (unless the child has done a similar problem and memorizes the steps). Time is better spent focusing on fundamentals at this age.

## **Suggested Eligible Content**

they should make sure they have enough text books for all the kids take time to review the material have a aide in the classroom to help with the kids that don't understand the material have adapted version of test and exams for the kids that iep or 504 agreements have slower classes for the kids that don't get the material

Students at the pre-algebra level study scatter plots and patterns. They can interpret graphs applying them to a situation. We do not focus on complex thinking. This is the age in which we master basic skills to prepare for algebra and the Keystone exam. A lot of this material is not covered because of time restraints and focus on Keystone testing.

With the change to the PA Core, it is difficult to understand what will be tested and asked of the students without detailed eligible content. A bank of possible questions aligned to the eligible content should be provided.

There should be additional material dealing with data displays... Stem and leaf plots, histograms, box-and-whisker plots.

It is not the content that is so challenging, rather the depth of knowledge for basic competency on the PSSA exam. The complexity of the questions asked which involve multiple steps do not allow students to clearly demonstrate their knowledge. With no work to go by you really do not understand what the student is thinking and where their misconceptions lie.

Hello