SAMPLES OF STANDARDS STUDENTS ARE LEARNING THIS NINE WEEKS:

7th Grade Compacted Math

STANDARDS: 7.EE.4.a, 7.EE.4.b, 7.RP.1, 7.RP.2b, 7.RP.2c, 8.EE.6, 8.EE.7, 8.EE.7a

7.RP.1

A recipe requires $\frac{1}{3}$ cup of milk for each $\frac{1}{4}$ cup of water. How many cups of water are needed for each cup of milk?

A. $\frac{1}{12}$

B. $\frac{3}{4}$

C. $\frac{11}{12}$

D. $1\frac{1}{3}$

E.

Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.
For example, if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction 1/2 / 1/4 miles per hour, equivalently 2 miles per hour.
Option B is correct.

7.EE.4.b

Ben earns $9 per hour and $6 for each delivery he makes. He wants to earn more than $155 in an 8-hour workday. What is the **least** number of deliveries he must make to reach his goal?

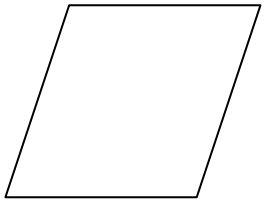
A. 11
B. 12
C. 13
D. 14

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. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.

Option D is correct.

7.RP.2.c.

A rhombus with side length s is shown below.



The perimeter, ***P***, of a rhombus is proportional to the length of each side, ***s***. Which equation represents this relationship?

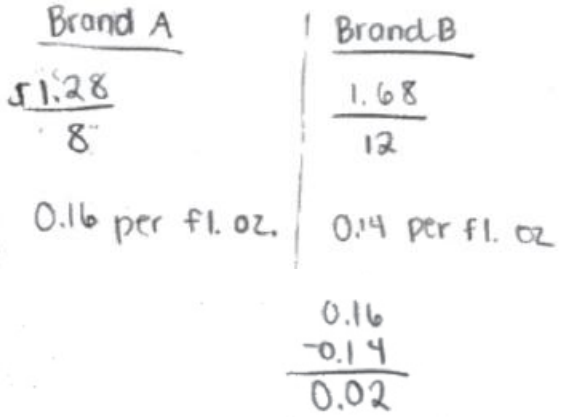
A. $P = 4s$
B. $s = 4P$
C. $P = 4 + s$
D. $s = 4 + P$

Represent proportional relationships by equations.
For 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.
Option A is correct.

7.RP.2.b.

A convenience store sells two brands of orange juice. Brand A contains 8 fluid ounces and costs $1.28. Brand B contains 12 fluid ounces and costs $1.68.
What is the difference in cost, in dollars, per fluid ounce between the two brands of juice?

Show your work.



Answer $ 0.02 per fluid ounce

Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.

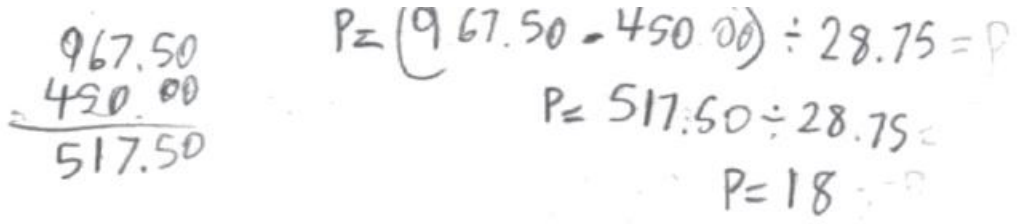
This response demonstrates a thorough understanding of the mathematical concepts and procedures embodied in the task. The cost per ounce is calculated for each brand by setting up fractions, and Brand B is subtracted from Brand A to find a correct difference (0.02).

7.EE.4.a.

Members of a baseball team raised $967.50 to go to a tournament. They rented a bus for $450.00 and budgeted $28.75 per player for meals. They will spend all the money they raised.

Write and solve an equation that models this situation and could be used to determine the number of players, *p,* the team could bring to the tournament.

Show your work.



Answer = 18 players

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. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?

This response demonstrates a thorough understanding of the mathematical concepts and procedures embodied in the task. A correct equation is provided (P = (967.50 – 450.00) ÷ 28.75), and the equation is solved correctly to find the correct answer (P = 18)

8.EE.6

A line contains the points (4, 2) and (0,-1). What is the equation of the line?

A. $y = 2x - 6$

B. $y = \frac{3}{4}x - 1$

C. $y = \frac{1}{4}x + 1$

D. $y = \frac{4}{3}x - \frac{10}{3}$

Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y = mx for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at b.

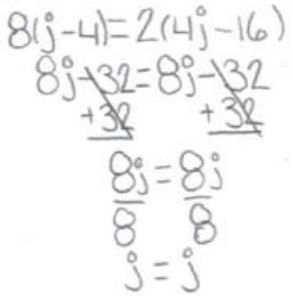
Option B is correct.

8.EE.7a

Determine the number of solutions that exist to the equation below.

$$8(j - 4) = 2(4j - 16)$$

Show your work.



Answer: Infinite

This response demonstrates a thorough understanding of the mathematical concepts in the task. The correct answer (Infinite) is given and work is done to show that both sides of the equation equal each other (8j – 32 = 8j – 32).

8.EE.7

A regular pentagon and an equilateral triangle have the same perimeter.

The perimeter of the pentagon is $5\left(\frac{1}{2}x + 2\right)$ inches.

The perimeter of the triangle is $4\ (x - 2)$ inches.

What is the perimeter of each figure?

A 12 inches

B 20 inches

C 36 inches

D 40 inches

Answer: D