SAMPLES OF STANDARDS STUDENTS ARE LEARNING THIS NINE WEEKS:

7th Grade Math

STANDARDS: 7.EE.3, 7.EE.4.a, 7.EE.4.b, 7.RP.1, 7.RP.2b, 7.RP.2c, 7.RP.3

7.RP.1
Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.

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

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.RP.3
Use proportional relationships to solve multistep ratio and percent problems.   Examples:
simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent
increase and decrease, percent error.

During a sale, a store offered a 40% discount on a particular camera that was originally
priced at $450. After the sale, the discounted price of the camera was increased by
40%. What was the price of the camera after this increase?

    A. $252
    B. $360
    C. $378
    D. $450

Option C is correct.

7.EE.4.b
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.

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
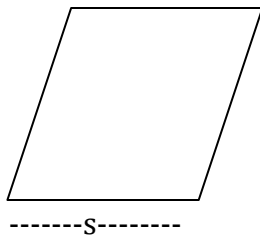reach his goal?

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

Option D is correct.

7.RP.2.c.
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.

A rhombus with side length s is shown below.

------- s --------

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. $s = 4 + P$

Option A is correct.

7.E.E.3
Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. For 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. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 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.

Salid bought 35 feet of window trim at a hardware store. The trim cost $1.75 per foot, including sales tax. If Salid paid with a $100.00 bill, how much change should he have received?

A. $20.00
B. $38.75
C. $61.25
D. $80.00

Option B is correct.

7.RP.2.b.
Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.

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.

Brand A

$$\frac{\$1.28}{8}$$

0.16 per fl. oz.

Brand B

$$\frac{1.68}{12}$$

0.14 per fl. oz

$$\begin{array}{r} 0.16 \\ -0.14 \\ \hline 0.02 \end{array}$$

Answer $ __0.02__ per fluid ounce

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.
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?

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.

$$967.50$$
$$-450.00$$
$$\overline{517.50}$$

$$P = (967.50 - 450.00) \div 28.75 = P$$
$$P = 517.50 \div 28.75 =$$
$$P = 18$$

Answer = 18 players

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)