

A

#: _____ Name: _____ Date: _____ Period: _____

GOING SHOPPING
OPEN ENDED ON DISCOUNT

The Carters are buying a new CD player. Three stores have the model they want on sale this week. Here are the ads:

<u>RADIO SHOP</u>	<u>DISCOUNT CITY</u>	<u>RALPH'S</u>
Regular Price: \$200	Regular Price: \$180	Regular Price: \$200
Discount: 20% off $\frac{?}{200} = \frac{80}{100}$	Discount: 30% off $\frac{?}{180} = \frac{70}{100}$	Discount: 10% off <u>PLUS</u> an extra 20% off

100/1600

100/1260

100/1800
 $\frac{?}{200} = \frac{90}{100}$
 $\frac{?}{180} = \frac{80}{100}$
1440

- What is the sale price at each store? Show the proportion and answer for each store.

<u>Radio Shop</u> <u>Sale Price</u>	<u>Discount City</u> <u>Sale Price</u>	<u>Ralph's</u> <u>Sale Price</u>
$\frac{?}{200} = \frac{80}{100}$ \$160	$\frac{?}{180} = \frac{70}{100}$ \$126	\$144 or \$140

- Which store will give the Carters the best buy?

Discount City

- What will the price be?

\$126

if you did

$$\frac{?}{200} = \frac{70}{100}$$

B

Extended Constructive Response

Name: _____

Date: _____

Your math quiz scores are as follows:

90

93

85

75

82

- What is the mean of your scores?
- What is median of your scores?
- What is the range of your scores?
- Your teacher offers you the option of either dropping your lowest grade (so it won't be averaged in the mean) or adding a 95% to your scores. Which do you choose? Explain your answer.

$$\begin{array}{r}
 \text{Mean: } 90 \\
 27 \\
 15 \\
 \hline
 93 \\
 85 \\
 75 \\
 + 82 \\
 \hline
 425
 \end{array}$$

$$\begin{array}{r}
 85 = \text{Mean} \\
 5 \overline{) 425} \\
 \underline{40} \\
 25 \\
 \underline{25} \\
 0
 \end{array}$$

$$\begin{array}{r}
 75 \\
 82 \\
 \hline
 85 = \text{Median} \\
 90 \\
 93
 \end{array}$$

$$93 - 75 = 18 = \text{Range}$$

$$\begin{array}{r}
 \text{drop lowest grade} \\
 19 \\
 16 \\
 35 \\
 \hline
 82 \\
 85 \\
 90 \\
 + 93 \\
 \hline
 350
 \end{array}$$

$$\begin{array}{r}
 87.5 \\
 4 \overline{) 350.0} \\
 \underline{32} \\
 30 \\
 \underline{28} \\
 20
 \end{array}$$

$$\begin{array}{r}
 \text{add 95} \\
 425 \\
 + 95 \\
 \hline
 520
 \end{array}$$

$$\begin{array}{r}
 86.6 \\
 6 \overline{) 520.0} \\
 \underline{48} \\
 40 \\
 \underline{36} \\
 40 \\
 \underline{36} \\
 4
 \end{array}$$

Mrs. Martin wants to put tiles on the floor by the front door of her house. She wants to use three different colors in her design:

$\frac{1}{2}$ of the tiles are blue, $\frac{1}{4}$ are green, $\frac{1}{4}$ are red

- Use the grid below to design a floor for Mrs. Martin. Label each tile with the first letter of the color that should be placed there.

B	B	B	G	G	G
B	B	B	G	G	G
B	B	B	R	R	R
B	B	B	R	R	R

- Explain how you knew how many tiles would be blue, green, and red.

$\frac{1}{2}$ had to be blue. There are 24 tiles. I know $\frac{1}{2}$ of 24 is 12. So I knew there had to be 12 blue. I know 25% and 0.25 are equal. With 12 tiles remaining, I knew 6 had to be green and six had to be red.

- If she changed her mind after laying the tiles and decided she wanted to turn 3 of the blue tiles to red tiles, what percent of the new design would be red?

$$\begin{array}{r} 12 \\ - 3 \\ \hline 9 \end{array} \quad \begin{array}{r} 6 \\ + 3 \\ \hline 9 \end{array}$$

$$\frac{9}{24} = \frac{3}{8} = 37.5\%$$

D

Name: _____ Period: _____

Open-ended Response - Fractions

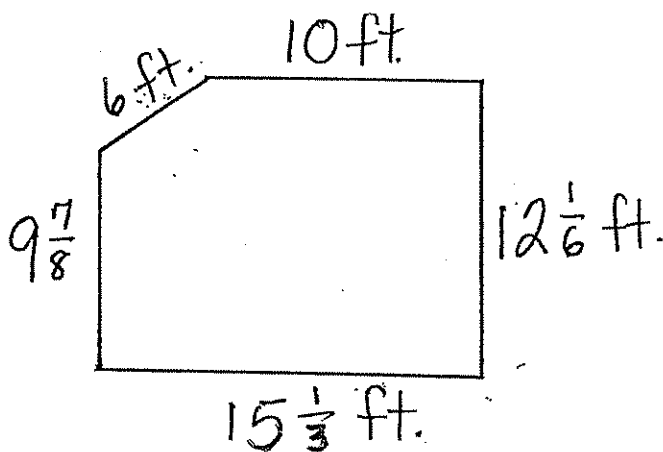
Read the following open-ended problem carefully. Show all your work, explain your reasoning when asked, and write neatly.

Keisha plans to put a wallpaper border around her bedroom. The room dimensions are below:

Estimate

$$\begin{array}{r} 10 \\ 6 \\ 10 \\ 15\frac{1}{2} \\ + 12 \end{array}$$

$$\boxed{53\frac{1}{2} \text{ ft}}$$

Exact

$$10 + 6 = 16$$

$$9\frac{7}{8} = 9\frac{21}{24}$$

$$12\frac{1}{6} = 12\frac{4}{24}$$

$$15\frac{1}{3} = 15\frac{8}{24}$$

$$36\frac{33}{24} =$$

$$37\frac{9}{24} + 16 =$$

$$53\frac{9}{24} =$$

$$53\frac{3}{8} \text{ ft}$$

- ESTIMATE how much border Keisha will need to go around the entire bedroom. SHOW ALL YOUR WORK and EXPLAIN YOUR REASONING.
- Find the EXACT AMOUNT of border Keisha will need. SHOW ALL WORK.
- If a roll of border can cover 15 feet, how many rolls will she need to buy for her bedroom? How much will not be used after she puts the border around her

room? She will need 4 rolls of border, which covers 60 ft.

$$\begin{array}{r} 60 \\ - 53\frac{3}{8} \\ \hline 59\frac{5}{8} \end{array}$$

$6\frac{5}{8} \text{ ft}$ will not be used

E

#: _____

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JOHNSON'S FAMILY TRIP

Four members of the Johnson family took a trip from Pittsburgh to Harrisburg, a distance of 221 miles. It took them 4 hours and 15 minutes to make the trip. The car required 13 gallons of gasoline for the entire trip. Their expenses included:

- Gasoline - \$1.25 per gallon
- Tolls - \$6.50 total
- Food - \$12.84 total

- How much did the Johnson family spend on gas? Show your work or explain how you got your answer.
- How much did the Johnson family spend IN ALL for their trip? Show your work or explain how you got your answer.
- What was the average cost per mile based on the total expenses of gas, food, and tolls for their trip? Show your work or explain how you got your answer.

$$\begin{array}{r}
 1.25 \\
 \times 13 \\
 \hline
 375 \\
 1250 \\
 \hline
 \$16.25 \text{ spent} \\
 \text{on gas}
 \end{array}$$

$$\begin{array}{r}
 16.25 \\
 6.50 \\
 + 12.84 \\
 \hline
 \$35.59 \\
 \text{Spent in all}
 \end{array}$$

$$\begin{array}{r}
 221 \overline{) 35.590} \\
 \underline{- 2210} \\
 1349 \\
 \underline{- 1326} \\
 230
 \end{array}$$

@ 16¢ or \$0.16 per mile