

STUDENT MATERIALS

PART 1 – DATA ANALYSIS PROMPT

Using a Gas Card to Buy Gas

You and your family are going on a trip and see a gas station where gas costs \$4.00 per gallon. You stop to put gas in the car. You spend \$40 to fill the gas tank. How many gallons of gas did you buy?

Write an addition equation, a multiplication equation, and a division equation in the places below to determine how many gallons of gas your high school brother pumped into the car's tank.

After writing the three equations, select the best one for determining the number of gallons pumped into the tank. Circle that equation.

Finally, support in writing why you chose that operation. Which equation is the most efficient (quickest and easiest) for finding the number of gallons of gas. Explain why you chose that equation.

Equation 1 – Addition

$$4+4=8 \quad 4+4=8 \quad 4+4=8 \quad 4+4=8$$

$$8+8=16 \quad 16+16=32 \quad 32+8=40 \quad \text{The answer}$$

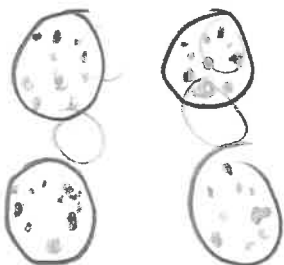
Equation 2 – Multiplication

$$4 \times 10 = 40$$

$$10 + 10 = 20 \quad 10 + 10 = 20$$

$$20 + 20 = 40$$

Equation 3 – Division



$$4 \div 10 = 40$$

In Part 2, on page 6, you will explain why the equation you circled is best? Be sure to explain mathematically why you chose that equation in the space on page 6.

PART 2 – TESTING PROCESS QUESTIONS

1. Explain your thinking as you went about solving the word problem through the three operational equations (addition, multiplication, and division) in Part 1. Include the mathematical processes you used for each equation.

For Addition I did four plus four = 8
 8 plus four = 16
 8 plus 8 = 16
 4 plus 4 = 8
 four plus four = 8
 8 plus 8 = 16 plus 16 = 32 plus 8 = 40
 For multiplication I did $4 \times 10 = 40$
 20 plus 20 = 40
 For division I did 40 divided by 10 = 4
 I put 10 dots inside them $4 \div 10 = 40$.

2. Which equation is the most efficient (quickest and easiest) for finding the number of gallons of gas? Explain why you chose that equation.

I think the most efficient way is Addition because you could just do four plus four = 8
 $4 + 4 = 8$
 $8 + 8 = 16$
 four plus four = 8
 four plus four = 8 plus 8 = 16 plus 16 = 32 plus 8 = 40.

PART 3 – REFLECTION QUESTIONS

After you have responded to the first two parts on this assessment, please complete the reflection questions below.

1. Do you think you got one of the correct answers? Explain why or why not?

Yes I think I got one of them right more like one page I think I got the addition and multiplication and division I think I get a good grade.

2. Which equation was hardest to write? How did you figure it out?

I think the hardest one was division because you have to do 4 corners and put 10 dots inside each one and count all them and $+ = 40$.