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Multiplication and Division of Expressions

1. Write an algebraic expression for the following situations.
   a. Five cars having p passengers each.
   b. There are c cookies evenly divided among 8 friends.

Solution:
a.
b.

2. Evaluate the following expressions.
   a. $(5 \times 7) \div 2$
   b. $42 \div (7 \times 6)$
   c. $(30 \div 5) \times (18 \div 6)$
   d. $(15 \times 3) \div (3 \times 3)$
   e. $11 \times 8 \div (16 \div 4)$
   f. $2{,}500 \times 100 \div 250$

Solution:
a.
b.
c.
d.
e.
f.

3. Write an expression for the following and evaluate. What does the value represent?
   a. A painter has to paint 12 rooms that take 8 hours to paint each. He already painted 10 rooms.
   b. A group of 10 people had a meal that costs $4 for each meal.
   c. Mark scored 9 goals for the first and second quarter. Each goal was worth 3 points.
   d. Two adults and three children came to a restaurant to eat. Each meal cost $5.

Solution:
a.
b.
c.
d.

4. Write an algebraic equation. Define its variable/s.
   a. A class with 5 columns and r rows.
   b. 35 marbles divided into b bags.
   c. A total of s shirts that costs $4.75 each.
   d. 12 slices of pizza divided among p people.

Solution:
a.
b.
c.
d.

5. Evaluate the following expressions.
   a. $(7 \times 8) \div a$ if a = 2
   b. $9 - 56 \div n$ if n = 8
   c. $7 \div b \times 5$ if b = 2
   d. $55 \div (2 \times m + 2)$ if m = 4
   e. $7 + a \times b \div 3$ if a = 5 and b = 9

Solution:
a.
b.
c.
d.
e.

6. Evaluate the expression $8 \div 2 \times (2y + 3)$ if y = 5.
   a. 52
   b. 43
   c. 42
   d. 50

Solution:

7. The debate team bought 14 matching T-shirts to split among its members. Each member of the team will get t T-shirts. How many people are on the debate team?
   a. $t - 14$
   b. $t + 14$
   c. $14 \div t$
   d. $14 - t$

Solution:

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Multiplication and Division of expressions

Answer Key

1.
   a. 5p (total number of passengers)
   b. $\frac{c}{8}$ (number of cookies each has)
2.
   a. 17.5
   b. 1
   c. 18
   d. 5
   e. 22
   f. 1000
3.
   a. $(12 - 10) \times 8 = 16$ (total hours to paint the rest of the rooms)
   b. $\$4 \times 10 = 40$ (total costs of the meal)
   c. $9 \times 3 = 27$ (total points earned in first and second quarter)
   d. $\$5 \times (2 + 3) = \$25$ (total cost of the meal)
4.
   a. $5r$ where r = number of rows
   b. $35 \div b$ where b = number of bags
   c. $s \times \$4.75$ where s = number of shirts
   d. $12 \div p$ where p = number of people
5.
   a. 28
   b. 2
   c. 17.5
   d. 5.5
   e. 22
6. A
7. C