tutorified

4.OA.A.3: Solve multistep word problems posed with whole numbers using the four operations.

1. Find the value of the expression. Follow the order of operations.
   a. $20 - (12 - 8)$
   b. $(18 - x) - (12 - y)$ if $x = 6$ and $y = 3$
   c. $15 - (z + 8)$ if $z = 3$
   d. $(p - 5) - (1 + q)$ if $p = 8$ and $q = 2$
   e. $(a + b) + 10$ if $a = 5$ and $b = 4$
   f. $m - (9 + n)$ if $m = 20$ and $n = 10$

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

2. Write an expression and find the value of the expression.
   a. Tina has 15 pens. She gives 5 pens to Karen and 3 pens to Paula. How many pens does Tina have now?
   b. Justin had $60. He spent $12 on pants and $28 on a pair of shoes. How much money does he have now?

   Solution:
   a. _____
   b. _____

3. Guess the value of the variable if the value of the expression is **5**.
   a. $x + 3$
   b. $15 - 4 - y$
   c. $8 + z + 5$

   Solution:
   a. _____
   b. _____
   c. _____

4. Write an expression using a variable. What does the variable represent? If the value of the variable is 5, evaluate the expression.
   a. Dan planted 10 trees. His classmates planted some more trees
   b. Cecile had 8 pairs of sneakers. She gave some to her sister.
   c. Margaret bought a bag for $4. She also bought a dress.

   Solution:
   a. _____
   b. _____
   c. _____

5. $15 + (x - 2) = 20$. What is the value of x?

   A. 4   B. 3   C. 5   D. 7

   Solution:

6. Which is the value of the expression below if $u = 8$ and $v = 7$? $18 - u + (v - 4)$
   A. 12   B. 11   C. 14   D. 13

   Solution:

4.OA.A.3 Finding the Values of Expressions

4.OA.A.3: Solve multistep word problems posed with whole numbers using the four operations.

Answer Key

1. Find the value of the expression. Follow the order of operations.
   a. $20 - (12 - 8)$
   b. $(18 - x) - (12 - y)$ if x = 6 and y = 3
   c. $15 - (z + 8)$ if z = 3
   d. $(p - 5) - (1 + q)$ if p = 8 and q = 2
   e. $(a + b) + 10$ if a = 5 and b = 4
   f. $m - (9 + n)$ if m = 20 and n = 10

   Solution:
   a. $20 - 4 = 16$
   b. $12 - 9 = 3$
   c. $15 - 11 = 4$
   d. $3 - 3 = 0$
   e. $9 + 10 = 19$
   f. $20 - 19 = 1$

2. Write an expression and find the value of the expression.
   a. Tina has 15 pens. She gives 5 pens to Karen and 3 pens to Paula. How many pens does Tina have now?
   b. Justin had $60. He spent $12 on pants and $28 on a pair of shoes. How much money does he have now?

   Solution:
   $15 - 5 - 3 = 10 - 3 = 7$
   a. Answer: 7 pens
   $60 - (12 + 28) = 60 - 40 = 20$
   b. Answer: $20

3. Guess the value of the variable if the value of the expression is **5**.
   a. $x + 3$
   b. $15 - 4 - y$
   c. $8 + z + 5$

   Solution:
   a. 8
   b. $11 - 5 = 6$
   c. $13 + 5 = 18$

4. Write an expression using a variable. What does the variable represent? If the value of the variable is 5, evaluate the expression.
   a. Dan planted 10 trees. His classmates planted some more trees
   b. Cecile had 8 pairs of sneakers. She gave some to her sister.
   c. Margaret bought a bag for $4. She also bought a dress.

   Solution:
   $10 + t$; t = more trees planted
   a. $10 + 5 = 15$; Ans: 15 trees
   $8 + s$; s = sneakers
   b. $8 + 5 = 13$; Ans: 13 sneakers
   $4 + d$; d = dress
   c. $4 + 5 = 9$; Ans: 9 dresses

5. $15 + (x - 2) = 20$. What is the value of x?

   A. 4   B. 3   C. 5   D. 7

   Solution:
   D. 7

6. Which is the value of the expression below if **u** = 8 and **v** = 7? $18 - u + (v - 4)$
   A. 12   B. 11   C. 14   D. 13

   Solution:
   D. 13