Worksheet 4

1. A log is 32 feet long. If it is cut into two pieces such that one piece is 6 ft longer than the other, then how long will the longer piece be?

   A. 32 ft

   B. 16 ft

   C. 19 ft

   D. 26 ft

2. The perimeter of a rectangular patio is 72 meters. The length is three times the width. If w represents the width of the patio, which of the following equations expresses the relationship.

   A. $3w = 72$

   B. $4w = 72$

   C. $8w = 72$

   D. $3w^2 = 72$

3. Pablo saves $36 less than twice what Tony saved. If Pablo saved $312, how much did Tony save?

   A. $138

   B. $174

   C. $276

   D. $348

4. Five less than nine times Maria's age is the same as twenty added to six times her age. If m represents Maria's age, which equation correctly expresses the relationship described above?

   A. $5 - 9m = 20 + 6m$

   B. $(5 - 9)m = (20 + 6)m$

   C. $9m - 5 = 6m + 20$

   D. $9(m - 5) = 6(m + 20)$

5. If 3 is added to five times a number, the result is 9 less than two times the same number. If x represents the number, which equation correctly expresses this relationship?

   A. $3 + 5x = 9 - 2x$

   B. $3 + 5(9 - x) = 2x$

   C. $5x + 3 = -9(2x)$

   D. $5x + 3 = 2x - 9$

6. A piggy bank contains a total of $2.95 in quarters and dimes. There are 9 more quarters than dimes. How many quarters are there?

   A. 11 quarters

   B. 2 quarters

   C. 9 quarters

   D. 8 quarters

7. The sum of two numbers is 47. The first number is 15 more than the second number. Find the first number.

   A. 16

   B. 32

   C. 31

   D. 8

8. A pipe is 80 ft long. It is cut into three pieces such that the middle piece is 5 ft longer than the shortest piece and the longest piece is 10 ft longer than the middle piece. If the length of the shortest piece is x feet, which equation correctly expresses this relationship?

   A. $x + x + x = 80$

   B. $x + x + 5 + x + 10 = 80$

   C. $x + 5 + x + 15 = 80$

   D. $3x + 20 = 80$

9. A car rental agency advertises renting a Toyota Tacoma 4x4 for $24.95 per day plus $0.29 per mile. If Juan rented the truck for 2 days, how many whole miles can he drive on a $100 budget?

   A. 150 miles

   B. 172 miles

   C. 180 miles

   D. 300 miles

10. Solve for y: $\dfrac{5}{16}y + \dfrac{3}{8}y = 2 + \dfrac{1}{4}y$

    A. $\dfrac{7}{32}$

    B. No Solution

    C. $-\dfrac{5}{7}$

    D. $\dfrac{32}{7}$

11. Simplify. $\dfrac{5 - 10 - 5 \cdot 23}{2^3 + 3^2 - 7}$

    A. -23

    B. -12

    C. -15

    D. -10

12. Solve for x : $5(3x - 2) = 35$

    A. 8

    B. -3

    C. 3

    D. -8