Name _____

Equations Practice

Solve the following equations. Show work to receive full credit.

1. $4x + 92 = 100$

2. $\frac{x}{6} - 11 = 31$

3. $m + 5(m - 1) = 7$

4. $11x + 33 = 15x + 5$

5. $a - 4a = 2a + 1 - 5a$

6. $5m - 2(m + 2) = -(2m + 15)$

7. $5n - 3 = 2(n + 3)$

Translate each sentence into an equation. Solve the equation.

8. Three more than four times a number is negative one.

9. Two less than three times a number is four.

10. Twice a number is twelve more than five times the number.

11. Eight times the sum of a number and two is ninety-six.

Solve each word problem.

12. Elizabeth spent half of her money on a new phone. She then spent $15 on pizza and ice cream. She now has $70. With how much money did she start?

13. Stewart took 5 dozen cookies to a bake sale. He sold 32 cookies. He then gave the rest to his friends – four to each friend. To how many friends did Stewart give cookies?

14. Nikki is 6 years older than Daniel. The sum of their ages is 54. How old is Daniel?

Write an equation that matches each situation.

15. Felix is currently 4 feet tall and growing at an average rate of 0.3 feet per year.

    a. Write an equation to represent Felix's height, *h*, after *y* years.

    b. (2, 4.6) is a solution to this equation. What does this solution mean?
        A. Felix is two feet tall and will grow to be 4.6 feet tall.
        B. Felix will grow 2 feet in 4.6 years.
        C. In 2 years, Felix will be 4.6 feet tall.
        D. It will take 4.6 years to grow another 2 feet.

16. Marta is planting flowers. She already has 15 flowers in her garden. She can plant 2 flowers each minute.

    a. Write an equation to represent the total number of flowers, *f*, Marta has in her garden after *m* minutes.

    b. (10, 35) is a solution to this equation. What does the solution mean?
        A. Marta has 10 flowers in her garden after 35 minutes.
        B. Marta has 35 flowers in her garden after 10 minutes.
        C. Marta already has 10 flowers planted and will plant 35 more.
        D. Marta has a total of 25 flowers in her garden after 35 minutes.

17. A gym charges a $30 sign-up fee and $25 per month.
    a. Write an equation to represent the cost, *c*, for a gym membership for *m* months.

    b. What is the total cost for one year of membership?

Equations Practice Answers

Solve the following equations. Show work to receive full credit.

1. $4x + 92 = 100$

   $x = 2$

2. $\frac{x}{6} - 11 = 31$

   $x = 252$

3. $m + 5(m - 1) = 7$

   $m = 2$

4. $11x + 33 = 15x + 5$

   $x = 7$

5. $a - 4a = 2a + 1 - 5a$

   No Solution

6. $5m - 2(m + 2) = -(2m + 15)$

   $m = -2\frac{1}{5}$

7. $5n - 3 = 2(n + 3)$

   $n = 3$

Translate each sentence into an equation. Solve the equation.

8. Three more than four times a number is negative one.

   $4n + 3 = -1$

   $n = -1$

9. Two less than three times a number is four.

   $3n - 2 = 4$

   $n = 2$

10. Twice a number is twelve more than five times the number.

    $2n = 5n + 12$

    $n = -4$

11. Eight times the sum of a number and two is ninety-six.

    $8(n + 2) = 96$

    $n = 10$

Solve each word problem.

12. Elizabeth spent half of her money on a new phone. She then spent $15 on pizza and ice cream. She now has $70. With how much money did she start?

    $170

13. Stewart took 5 dozen cookies to a bake sale. He sold 32 cookies. He then gave the rest to his friends – four to each friend. To how many friends did Stewart give cookies?

    7 friends

14. Nikki is 6 years older than Daniel. The sum of their ages is 54. How old is Daniel?

    24 years old

Write an equation that matches each situation.

15. Felix is currently 4 feet tall and growing at an average rate of 0.3 feet per year.

    a. Write an equation to represent Felix's height, *h*, after *y* years.

    $h = 0.3y + 4$

    b. (2, 4.6) is a solution to this equation. What does this solution mean?
        A. Felix is two feet tall and will grow to be 4.6 feet tall.
        B. Felix will grow 2 feet in 4.6 years.
        C. In 2 years, Felix will be 4.6 feet tall.
        D. It will take 4.6 years to grow another 2 feet.

16. Marta is planting flowers. She already has 15 flowers in her garden. She can plant 2 flowers each minute.

    a. Write an equation to represent the total number of flowers, *f*, Marta has in her garden after *m* minutes.

    $f = 2m + 15$

    b. (10, 35) is a solution to this equation. What does the solution mean?
        A. Marta has 10 flowers in her garden after 35 minutes.
        B. Marta has 35 flowers in her garden after 10 minutes.
        C. Marta already has 10 flowers planted and will plant 35 more.
        D. Marta has a total of 25 flowers in her garden after 35 minutes.

17. A gym charges a $30 sign-up fee and $25 per month.
    a. Write an equation to represent the cost, *c*, for a gym membership for *m* months.

    $c = 25m + 30$

    b. What is the total cost for one year of membership?

    $330