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10 Practice Test

For #1 to #4, circle the best answer.

1. What is the solution to $\dfrac{x}{3} = -12$?

   A $x = 36$ **B** $x = 4$

   C $x = -4$ **D** $x = -36$

2. What is the solution to $5n + 6 = -4$?

   A $n = -10$ **B** $n = 5$

   C $n = -2$ **D** $n = 2$

3. Which of these equations has the solution $p = -6$?

   A $\dfrac{p}{3} - 4 = -2$ **B** $\dfrac{p}{3} + 4 = -2$

   C $\dfrac{p}{-3} - 4 = -2$ **D** $\dfrac{p}{-3} + 4 = -2$

4. Wanda solved the equation $4(x - 3) = 2$ like this:

   $$4(x - 3) = 2$$
   Step 1 $\quad 4x - 12 = 8$
   Step 2 $\quad\quad 4x = 20$
   Step 3 $\quad\quad\quad x = 5$

   In which step did Wanda make her first mistake?

   A Step 1 **B** Step 2

   C Step 3 **D** No mistake was made.

Complete the statements in #5 and #6.

5. The opposite operation of division is _____.

6. The solution to $4(y + 5) = 24$ is $y = $ _____.

Short Answer

7. Dillon used algebra tiles to model a problem.

a) What equation is modelled? _____

b) Using the algebra tiles, what is the first step that Dillon should take to solve the equation?

_____

8. a) Draw algebra tiles to model the equation $3x + 5 = -7$.

b) Draw the tiles you need to make zero pairs.

Explain why you need those tiles.

_____

c) To solve for x, divide both sides of the equation by the numerical coefficient _____.
Explain why you would divide by this number.

_____

d) Solve the equation.

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9. Solve each equation. Check your answers.

a) $4x = 48$

b) $\dfrac{t}{-5} = -8$

Check:

Left Side	Right Side

Check:

Left Side	Right Side

c) $2k - 6 = 12$

d) $12 = 4(x - 2)$

Check:

Left Side	Right Side

Check:

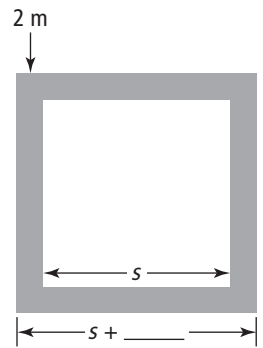| Left Side	Right Side

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10. Beth would like to put a 2-m-wide grass border around a square garden. The perimeter of the outside of the border is 44 m.

   a) Write an equation for this situation.

   Let s be the length of the side of the garden.
   Perimeter of large square = 4 × length

   _____ = 4 (s + _____)
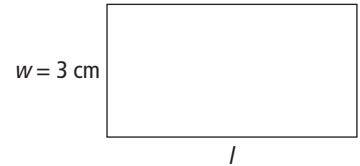
   b) Find the length of each side of the garden. Solve your equation.

   _____

2 m

s

s + ____

11. The formula for the perimeter of a rectangle is $P = 2(l + w)$.
   P is the perimeter, l is the length, and w is the width.
   Find the length of the rectangle if $P = 14$ cm and $w = 3$ cm.

   $w = 3$ cm

   l

   Formula → $P = 2(l + w)$

   Equation → _____ = $2(l +$ _____)
   Solve →

   Use the distributive property or divide first.

   Check:

Left Side	Right Side

   Sentence: _____