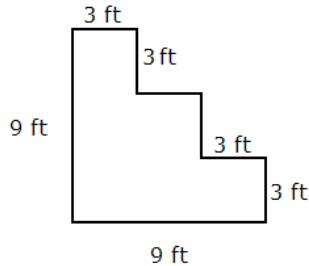


1. List all factors of 96.
2. Consider the figure shown on the picture below.



- (a) Find the perimeter of the figure. Include units in your answer.
 - (b) Find the area of the figure. Include units in your answer.
3. Is 1209 a prime number?
 4. Simplify.

(a)
$$\frac{(-2) + (-2)^2 + (-2)^3 + (-2)^4}{-2^2 - 1} =$$

(b)
$$\frac{-3^2 - (-3)^2 + (-24) \div 2 \cdot (-3)}{-(-5)^2 - (-3)^3} =$$

5. Evaluate the expression $2ab + a^3 - 2b^2 - a^2b$ if
 - (a) $a = -1$ and $b = 5$.
 - (b) $a = -3$ and $b = -1$
 - (c) $a = b = 6$

6. Solve each of the following equations. Make sure to check your solutions.

(a) $3x - 8 = x + 12$

(b) $11x - 6 = 18 - x$

(c) $2x - 1 = 7 - 2x$

(d) $\frac{5a + 1}{4} = -6$

7. Consider the equation $y = 5x^2 - 7$

- (a) Does the pair of numbers $x = 2, y = 8$ satisfy the equation?
- (b) Does the pair of numbers $x = 1, y = -2$ satisfy the equation?
- (c) Does the pair of numbers $x = -1, y = -2$ satisfy the equation?

8. The difference between two numbers is 7. They add up to 23. Find these numbers.
9. One side of a rectangle is 5 in shorter than the other side. Find the length of the sides if the perimeter of the rectangle is 54.
10. A father is 24 years older than his son. The sum of their ages is 42. How old are they?
11. Mary and Pat buy dinner. The bill is \$27, and Mary agreed to pay \$3 more than Pat. How much will each pay?