

Algebra Workshop

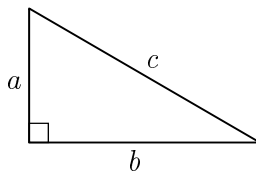
Name: _____

Homework 5

1. A rectangle has area 48 and perimeter 28. Determine the length and width of the rectangle.

2. A circle has circumference 20. What is the area of the circle?

3. In the following triangle, $b = 6$ and $c = 10$. Determine the value of a .



4. The length of a rectangular sign is 3 feet longer than the width. If the sign's area is 54 square feet, find its length and width.

5. Each side of a square is lengthened by 3 inches. The area of this new, larger square is 64 square inches. Find the length of a side of the original square.

6. Multiply the following polynomials, and then simplify your answer.

(a) $(x - 1)(2x - 4)$

(b) $(x - 1)(x + 5)$

(c) $(x + 3)^2$

(d) $(x^2 + 2x)(3x^2 + 4)$

(e) $(2x + 3y)(x - y)$

(f) $(x - 3)(x^2 + 3x + 1)$

(g) $(x + 1)(x - 1)(x + 4)$

(h) $(x - 2)^3$

7. Solve the following equations:

(a) $(x - 3)(x + 4) = 0$

(b) $(x + 5)(3x - 9) = 0$

(c) $x^2 - 8x - 20 = 0$

(d) $x^2 - 7x + 10 = 0$

(e) $x^2 - 7x = 0$

(f) $x^2 - 16 = 0$

(g) $x^2 - x = 6$

(h) $x^2 = 5x - 6$