

Algebra Workshop

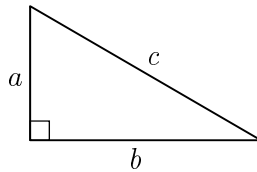
Name: _____

Worksheet 5

1. The area of a square is 49. Determine the length of one side of the square.

2. The area of a circle is 32. Determine the length of the radius of the circle.

3. In the following triangle, $a = 5$ and $c = 13$. Determine the value of b .



4. A pizza place has two sizes of pizza, medium and large. The medium size has a diameter of 12 inches; the large size has a diameter 16 inches. Do you get more total pizza by purchasing two medium pizzas or one large pizza?

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

(a) $x(2 + x)$

(b) $(2x)(3x^2)$

(c) $3x^2(x^2 + 2x + 5)$

(d) $(x + 1)(x + 3)$

(e) $(x - 1)^2$

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

(g) $(x + y)(x - 3y)$

(h) $(x + 1)(y + 3)$

6. Factor the following polynomials using the Greatest Common Factor:

(a) $x^2 + 5x$

(b) $4x^3 + 8x^2$

7. Factor the following polynomials:

(a) $x^2 + 5x + 6$

(b) $x^2 + 8x + 15$

(c) $x^2 + 7x + 12$

(d) $x^2 - 5x + 6$

(e) $x^2 - x - 6$

(f) $x^2 + 2x - 8$

8. Solve the following equations:

(a) $(x - 3)(x + 5) = 0$

(b) $(x + 2)(x - 7) = 0$

(c) $x^2 + 9x + 20 = 0$

(d) $x^2 - 5x + 6 = 0$

(e) $x^2 - 10x + 16 = 0$

(f) $x^2 - x - 12 = 0$

(g) $x^2 = 6x - 9$

(h) $x^2 + 3x = 10$