Solving Quadratic Equations by Factoring

Name:_____

1. Solve the following.

(A) $x + 1 = 0$

(B) $x - 3 = 0$

(C) $2x + 5 = 0$

2. Solve the following.

(A) $2(x - 3)(x + 7) = 0$

(B) $2x(x + 4) = 0$

(C) $-4(3x - 10)(2x + 7) = 0$

3. Factor and solve.

(A) $x^2 + 7x + 12 = 0$

(B) $x^2 + 2x = 15$

(C) $x^2 = 5x + 6$

(D) $(x + 5)(x - 2) = 8$

(E) $(x - 5)(x + 3) = -7$

(F) $(x - 3)(x + 2) = 4x$

4. Solve the following word problems.

(A) The area of a rectangular carpet is 28 ft^2. If the length is 3 ft more than the width, find the dimensions.

(B) From my house, a tree is directly north and a rock is directly east. The tree and rock are 10 m apart. If the tree is 2m further away from my house than the rock, find all distances.

Simplifying Square Roots.

Name:_____

1. Simplify the following (do not use a calculator!).

(A) $\sqrt{16+9}$

(B) $\sqrt{16}+\sqrt{9}$

(C) $\sqrt{100-64}$

(D) $\sqrt{100}-\sqrt{64}$

2. What are the nearest two integers to the following roots:

(A) $\sqrt{7}$

(B) $\sqrt{30}$

(C) $\sqrt{70}$

(D) $\sqrt{111}$

3. Simplify the following expressions.

(A) $\sqrt{18}$

(B) $\sqrt{x^3}$

(C) $\sqrt{8x^5}$

(D) $\sqrt{25x^5}$,

(E) $-\sqrt{9x^3y^6}$

(F) $3\sqrt{4x^5y^7}$

(G) $\sqrt{12xy^3}$

(H) $-\sqrt{50x^7y^6}$

(I) $3\sqrt{20x^2y^3}$