## PRE-CALCULUS 11 QUADRATIC EQUATIONS SOLVING QUADRATIC EQUATIONS BY FACTORING

## A. Definitions

- 1. factor: terms or expressions that when multiplied form a product.
- 2. **quadratic equation:** an equation that can be written in the form:  $ax^2 + bx + c = 0$ . Where a,b and c are constants and  $a \neq 0$ . Quadratic equations usually have 2 answers.

## B. Solving Quadratic Equations

Solve each equation and verify the solutions.

1) 
$$(x-5)(x+2)=0$$
  
 $\times -5 = 0$   
 $\times = 5$   
 $\times = -2$ 

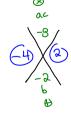
$$X = 5, -2$$

1) 
$$(x-5)(x+2)=0$$

$$($$

2) 
$$x^{2} + 5x = 0$$
  
 $(x + 5) = 0$   
 $x = 0$   $x + 5 = 0$ 

$$X = 0, -5$$



3) 
$$x^2 - 2x - 8 = 0$$

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

$$x + 2 = 0$$

$$x + 3 = 0$$

$$X = 4, -2.$$

2) 
$$x^2 + 5x = 0$$

$$x(x + 5) = 0$$

$$x + 5x = 0$$

$$x^2 + 5x = 0$$

$$x^2 + 5x = 0$$

$$(0)^2 + 5(0) = 0$$

$$0 = 0$$

$$0 = 0$$

$$0 = 0$$

