

# Quadratic Equations

Ex1  $x^2 + 7x + 6 = 0$  +1 +6 ✓  
-1 -6  
+2 +3  
-2 -3

$(x + 1)(x + 6) = 0$

Either  $x + 1 = 0$  or  $x + 6 = 0$

$x = -1$        $x = -6$

Ex2  $x^2 - 7x + 12 = 0$  +1 +12  
-1 -12  
+2 +6  
-2 -6  
+3 +4  
-3 -4 ✓

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

Either  $x - 3 = 0$  or  $x - 4 = 0$

$x = 3$        $x = 4$

Ex3  $x^2 - 3x - 10 = 0$  +1 -10  
-1 +10  
+2 -5 ✓  
-2 +5

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

Either  $x + 2 = 0$  or  $x - 5 = 0$

$x = -2$        $x = 5$

Ex4  $x^2 + x - 20 = 0$  +1 -20  
-1 +20  
+2 -10  
-2 +10  
+4 -5  
-4 +5 ✓

$(x - 4)(x + 5) = 0$

Either  $x - 4 = 0$  or  $x + 5 = 0$

$x = 4$        $x = -5$

## Exercise

$$1) \quad x^2 + 6x + 8 = 0$$

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

$$\text{Either } x + 2 = 0 \quad \text{or } x + 4 = 0$$

$$\underline{x = -2}$$

$$\underline{x = -4}$$

$$2) \quad x^2 - 2x - 15 = 0$$

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

$$\text{Either } x + 3 = 0 \quad \text{or } x - 5 = 0$$

$$\underline{x = -3}$$

$$\underline{x = 5}$$