

HW 8-1

Solve each equation by factoring. State the x-intercepts?

1) $m^2 - 6m + 8 = 0$

$$(m-4)(m-2) = 0$$

$$(4,0) (2,0) \quad m = 4, 2$$

3) $x^2 + 12x + 35 = 0$

$$(x+7)(x+5) = 0$$

$$x = -7 \quad x = -5$$

$$(-7,0) \quad (-5,0)$$

5) $n^2 - n - 20 = 0$

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

$$n = 5 \quad n = -4$$

$$(5,0) \quad (-4,0)$$

7) $n^2 - n - 6 = 0$

$$(n-3)(n+2) = 0$$

$$n = 3 \quad n = -2$$

$$(3,0) \quad (-2,0)$$

9) $n^2 + n - 12 = 0$

$$(n+4)(n-3) = 0$$

$$n = -4 \quad n = 3$$

$$(-4,0) \quad (3,0)$$

11) $r^2 - 11r + 28 = 0$

$$(r-7)(r-4) = 0$$

$$r = 7 \quad r = 4$$

$$(7,0) \quad (4,0)$$

13) $b^2 + 10b + 16 = 0$

$$(b+8)(b+2) = 0$$

$$b = -8 \quad b = -2$$

$$(-8,0) \quad (-2,0)$$

15) $x^2 - 2x - 24 = 0$

$$(x-6)(x+4) = 0$$

$$x = 6 \quad x = -4$$

$$(6,0) \quad (-4,0)$$

2) $r^2 - 36 = 0$

$$(r-6)(r+6) = 0$$

$$r = -6, 6$$

$$(-6,0) \quad (6,0)$$

4) $a^2 + 3a = 0$

$$a(a+3) = 0$$

$$a = 0 \quad a = -3$$

$$(0,0) \quad (-3,0)$$

6) $v^2 + 3v - 4 = 0$

$$(v+4)(v-1) = 0$$

$$v = -4 \quad v = 1$$

$$(-4,0) \quad (1,0)$$

8) $b^2 + 9b + 20 = 0$

$$(b+4)(b+5) = 0$$

$$b = -4 \quad b = -5$$

$$(-4,0) \quad (-5,0)$$

10) $b^2 + b - 2 = 0$

$$(b+2)(b-1) = 0$$

$$b = -2 \quad b = 1$$

$$(-2,0) \quad (1,0)$$

12) $v^2 - 16 = 0$

$$(v-4)(v+4) = 0$$

$$v = 4 \quad v = -4$$

$$(4,0) \quad (-4,0)$$

14) $n^2 - 9n + 20 = 0$

$$(n-5)(n-4) = 0$$

$$n = 5 \quad n = 4$$

$$(5,0) \quad (4,0)$$

16) $b^2 - 4 = 0$

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

$$b = 2 \quad b = -2$$

$$(2,0) \quad (-2,0)$$