

Use the discriminant to find the # of roots/x-inter./zeros.

Using the Quadratic Formula  $b^2 - 4ac$

Solve each equation with the quadratic formula.

1)  $v^2 + 2v - 8 = 0$

$2^2 - 4(1)(-8) = 36$  2

3)  $2v^2 - 5v + 3 = 0$

$(-5)^2 - 4(2)(3) = 1$  2

5)  $2n^2 - n - 6 = 0$

$2n^2 - n - 6 = 0$   
 $(-1)^2 - 4(2)(-6) = 49$  2

7)  $8n^2 - 4n - 18 = 0$

$8n^2 - 4n - 18 = 0$   
 $(-4)^2 - 4(8)(-18) = 592$  2

9)  $10x^2 + 9 = 0$

$10x^2 - x + 9 = 0$   
 $(-1)^2 - 4(10)(9) = -359$  0

11)  $3a^2 - 6a + 3 = 0$

$3a^2 - 6a + 3 = 0$   
 $(-6)^2 - 4(3)(3) = 0$  1

13)  $9x^2 - 11 = 6x$

$9x^2 - 6x - 11 = 0$   
 $(-6)^2 - 4(9)(-11) = 432$  2

15)  $14m^2 + 1 = 6m^2 + 7m$

$8m^2 - 7m + 1 = 0$   
 $(-7)^2 - 4(8)(1) = 17$  2

2)  $k^2 + 5k - 6 = 0$

$(5)^2 - 4(1)(-6) = 49$  2

4)  $2a^2 - a - 13 = 0$

$2a^2 - a - 13 = 0$   
 $(-1)^2 - 4(2)(-13) = 121$  2

6)  $b^2 - 4b - 14 = 0$

$b^2 - 4b - 12 = 0$   
 $(4)^2 - 4(1)(-12) = 64$  2

8)  $8a^2 + 6a + 5 = 0$

$8a^2 + 6a + 5 = 0$   
 $(6)^2 - 4(8)(5) = -124$  0

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

$n^2 - 9n + 20 = 0$   
 $(-9)^2 - 4(1)(20) = 1$  2

12)  $x^2 - 3x - 40 = 0$

$x^2 + 3x - 40 = 0$   
 $(3)^2 - 4(1)(-40) = 169$  2

14)  $4a^2 - 8 = 0$

$4a^2 - a - 8 = 0$   
 $(-1)^2 - 4(4)(-8) = 33$  2

16)  $4x^2 + 4x - 8 = 0$

$4x^2 + 4x - 9 = 0$   
 $(4)^2 - 4(4)(-9) = 160$  2