

Finding Zeros - Factoring

Solve each equation by factoring.

1) $r^2 + 10r + 25 = 0$

$(r+5)(r+5) = 0$

$r+5=0$

$r = -5$

$r+5=0$

$r = -5$

2) $x^2 + 10x + 16 = 0$

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

$x+2=0$

$x = -2$

$x+8=0$

$x = -8$

3) $x^2 + 8x + 16 = 4$

$x^2 + 8x + 12 = 0$

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

$x+4=0$

$x = -4$

$x+2=0$

$x = -2$

4) $a^2 - 15a + 63 = 7$

$a^2 - 15a + 56 = 0$

$(a-8)(a-7) = 0$

$a-8=0$

$a = 8$

$a-7=0$

$a = 7$

5) $x^2 + 24 = -10x$

$x^2 + 10x + 24 = 0$

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

$x+4=0$

$x = -4$

$x+6=0$

$x = -6$

6) $r^2 = 6r + 7$

$r^2 - 6r - 7 = 0$

$(r-7)(r+1) = 0$

$r-7=0$

$r = 7$

$r+1=0$

$r = -1$

7) $-4v^2 + 32 = 8 - 5v^2 + 10v$

$v^2 - 10v + 24 = 0$

$(v-6)(v-4) = 0$

$v-6=0$

$v = 6$

$v-4=0$

$v = 4$

8) $-4b^2 + 7b + 16 = -b - 5b^2$

$b^2 + 8b + 16 = 0$

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

$b+4=0$

$b = -4$

$b+4=0$

$b = -4$