

Equation: $y = x(x-6)$ $x=0$
 or $x-6=0$

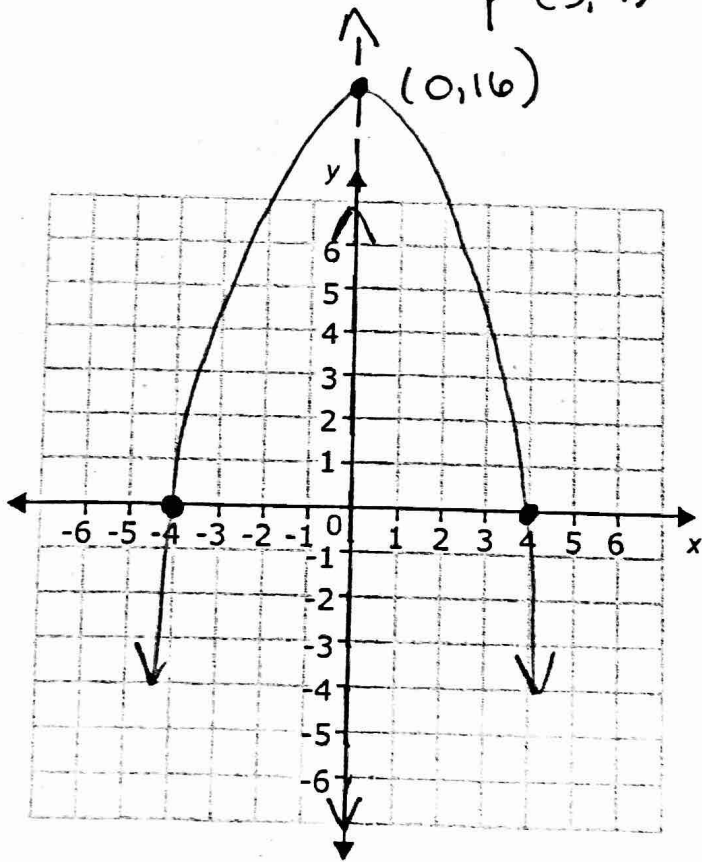
Equivalent equation: $0 = x(x-6)$
 $y = x^2 - 6x$

x-int $(0, 0)$ y-int $(0, 0)$
 $y=0$ $x=0$

Maximum or minimum point $(3, -9)$ $y = 3^2 - 6(3)$
 plug line of symmetry $y = 9 - 18$
 value in for x $y = -9$

Line of symmetry $x = 3$

1/2 way
 in between
 x-int.



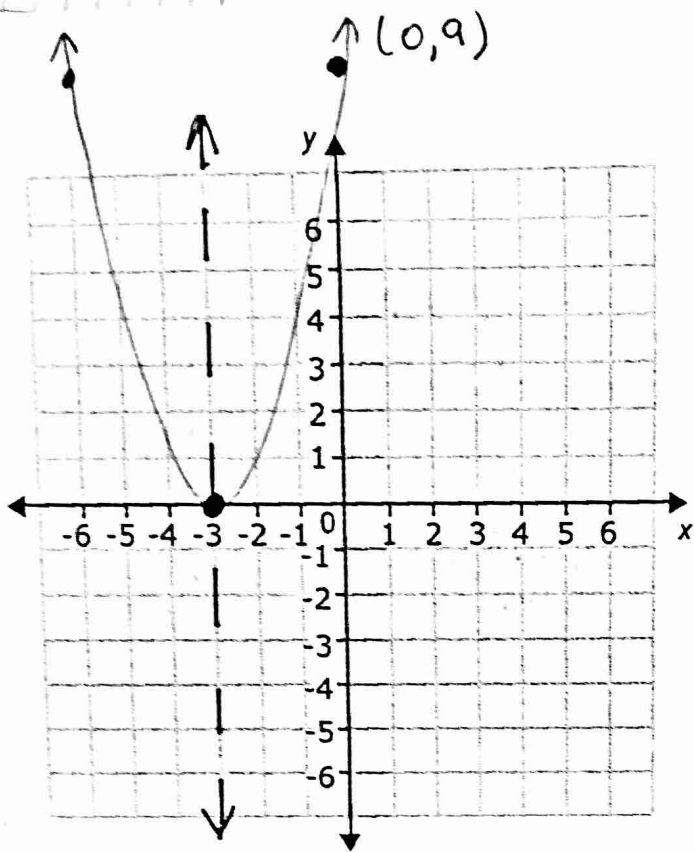
Equation: $y = 16 - x^2$

Equivalent equation: $y = (4-x)(4+x)$

x-int $(4, 0)$ y-int $(0, 16)$
 $(-4, 0)$

Maximum or minimum point $(0, 16)$ $y = 16 - 0$
 $y = 16$

Line of symmetry $x = 0$



Equation: $y = x^2 + 6x + 9$

up

Equivalent equation: $y = (x+3)(x+3)$

x-int $(-3, 0)$ y-int $(0, 9)$

$x+3=0$

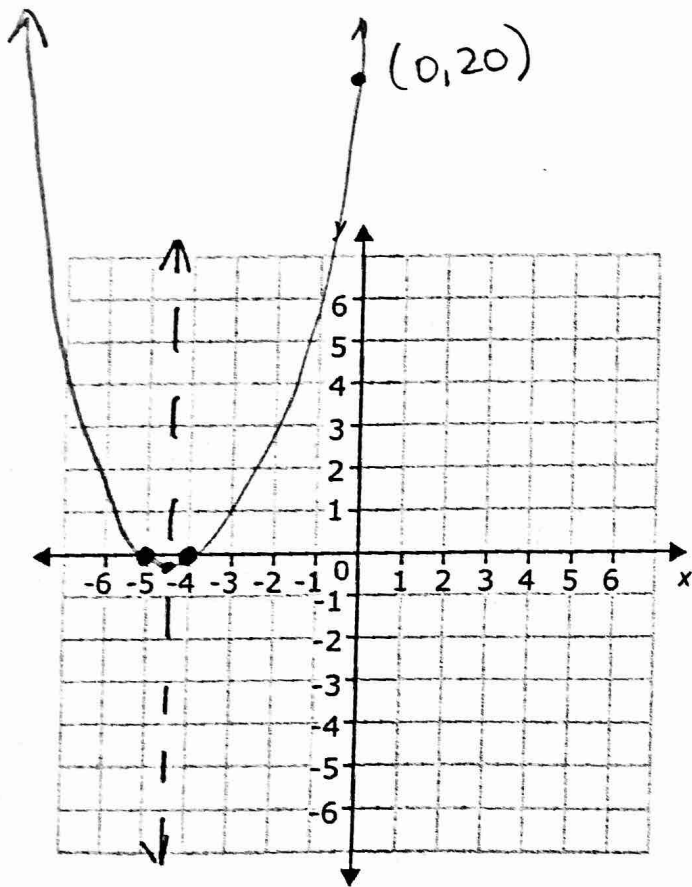
$x=0$

$x+3=0$

Maximum or minimum point $(-3, 0)$

Line of symmetry $x = -3$

$y = (-3)^2 + 6(-3) + 9$
 $= 9 - 18 + 9$
 $y = 0$



Equation: $y = x^2 + 9x + 20$

Equivalent equation: $y = (x+4)(x+5)$

x-int $(-4, 0)$ y-int $(0, 20)$

$(-4, 0)$

$(-5, 0)$

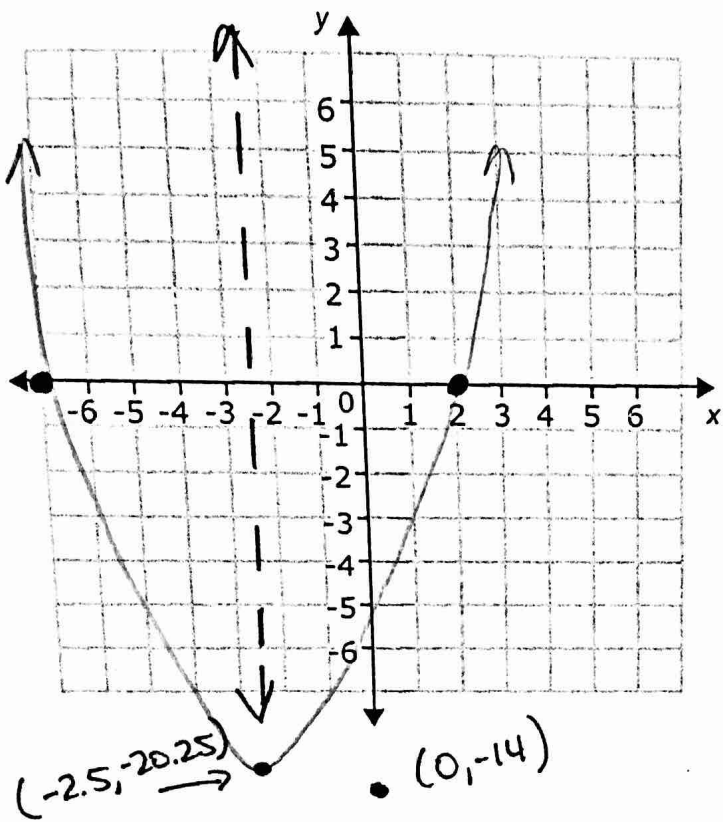
$(x+4)=0$

$(x+5)=0$

Maximum or minimum point $(-4.5, -2.25)$

$y = (-5)(-5)$

Line of symmetry $x = -4.5$



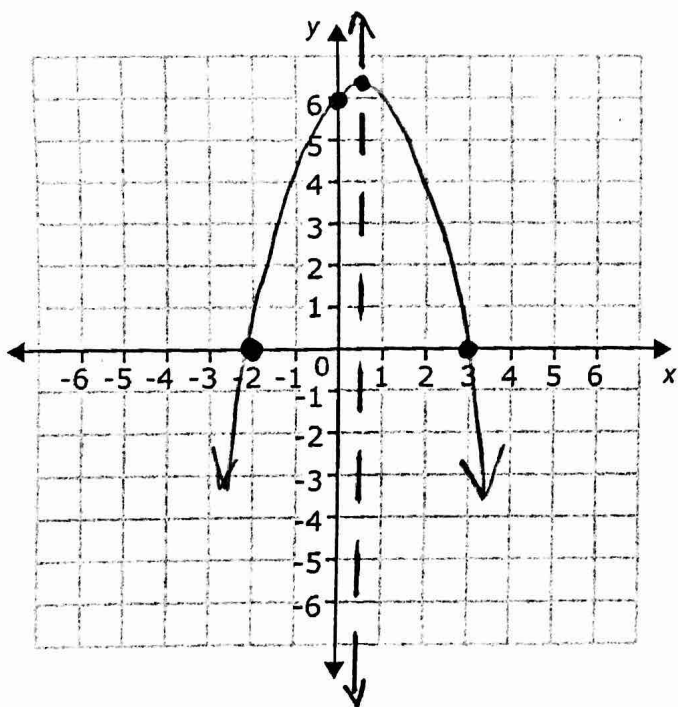
Equation: $y = x^2 + 5x - 14$

Equivalent equation: $y = (x + 7)(x - 2)$

x-int $(-7, 0)$ y-int $(0, -14)$

Maximum or minimum point $(-2.5, -20.25)$
 $y = (4.5)(-4.5)$
 $y = -20.25$

Line of symmetry $x = -2.5$



Equation: $y = (3 - x)(2 + x)$

Equivalent equation: $y = -x^2 + x + 6$

x-int $(3, 0)$ y-int $(0, 6)$
 $(-2, 0)$

Maximum or minimum point $(1.5, 6.25)$

Line of symmetry $x = \frac{1}{2}$
 $y = (2.5)(2.5)$
 $y = 6.25$