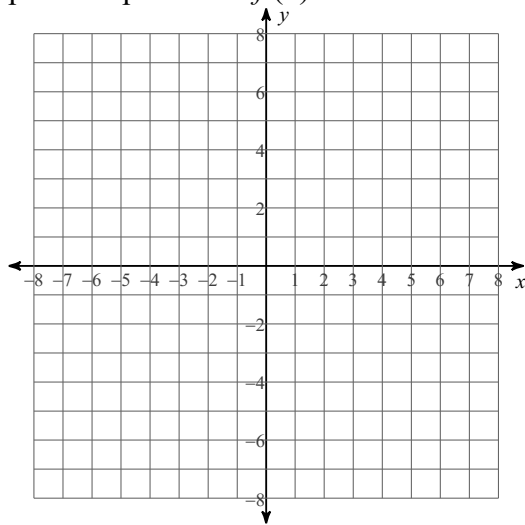


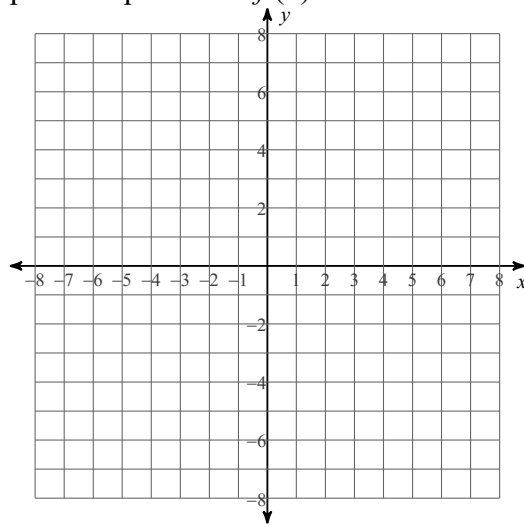
Parabola Anatomy

Fill in all the blanks for each parabola.

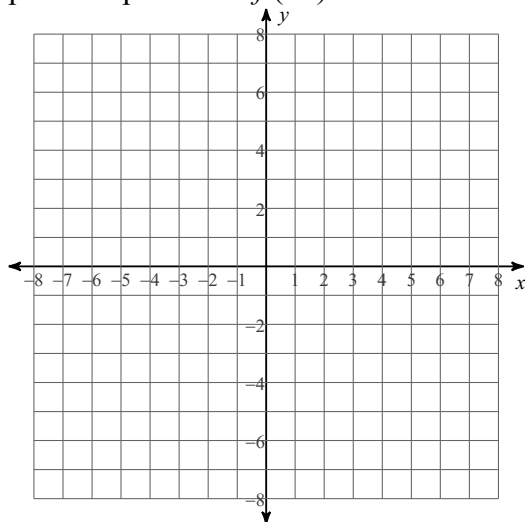
- 1) x-intercepts: 3 and 7
 vertex: $(5, -4)$
 axis of symmetry: $x = 5$
 vertex form: $f(x) = (x - 5)^2 - 4$
 intercept form: $f(x) = (x - 3)(x - 7)$
 standard form: $f(x) = x^2 - 10x + 21$
 point on parabola: $f(2) = 5$



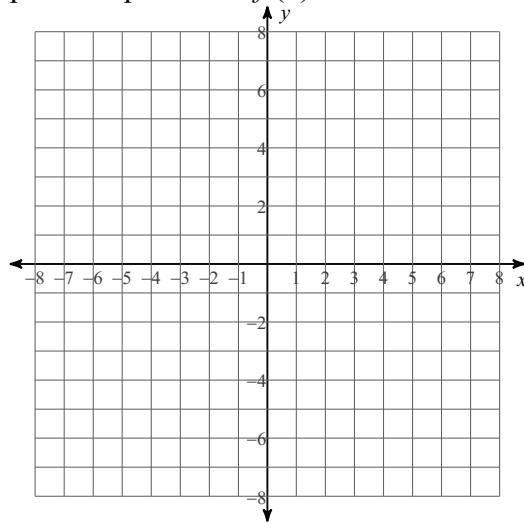
- 2) x-intercepts: 1 and 3
 vertex: $(2, -1)$
 axis of symmetry: $x = 2$
 vertex form: $f(x) = (x - 2)^2 - 1$
 intercept form: $f(x) = (x - 1)(x - 3)$
 standard form: $f(x) = x^2 - 4x + 3$
 point on parabola: $f(4) = 3$



- 3) x-intercepts: -6 and -2
 vertex: $(-4, -4)$
 axis of symmetry: $x = -4$
 vertex form: $f(x) = (x + 4)^2 - 4$
 intercept form: $f(x) = (x + 6)(x + 2)$
 standard form: $f(x) = x^2 + 8x + 12$
 point on parabola: $f(-1) = 5$



- 4) x-intercepts: 5 and 7
 vertex:
 axis of symmetry:
 vertex form: $f(x) = (x - 6)^2 - 1$
 intercept form: $f(x) = (x - 5)(x - 7)$
 standard form: $f(x) = x^2 - 12x + 35$
 point on parabola: $f(4) = 3$



- 5) x-intercepts: -2
vertex: $(-2, 0)$

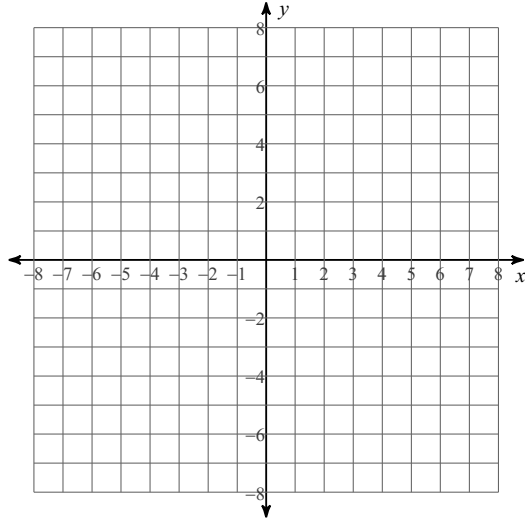
axis of symmetry:

vertex form: $f(x) = (x + 2)^2$

intercept form: $f(x) = (x + 2)(x + 2)$

standard form: $f(x) = x^2 + 4x + 4$

point on parabola: $f(0) =$



- 6) x-intercepts: -1 and 3
vertex:

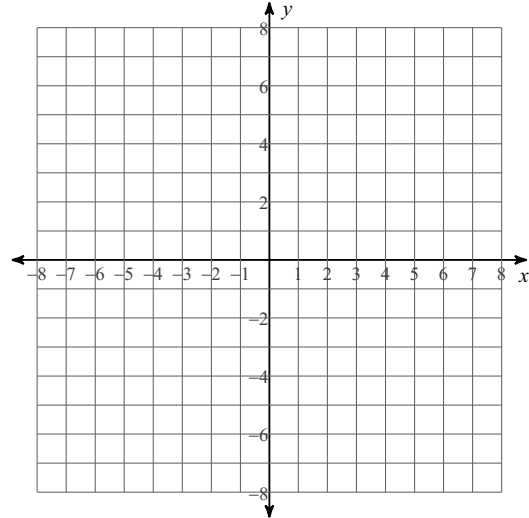
axis of symmetry: $x = 1$

vertex form: $f(x) = (x - 1)^2 - 4$

intercept form: $f(x) = (x + 1)(x - 3)$

standard form: $f(x) = x^2 - 2x - 3$

point on parabola: $f(4) =$



- 7) x-intercepts:
vertex: $(4, -1)$

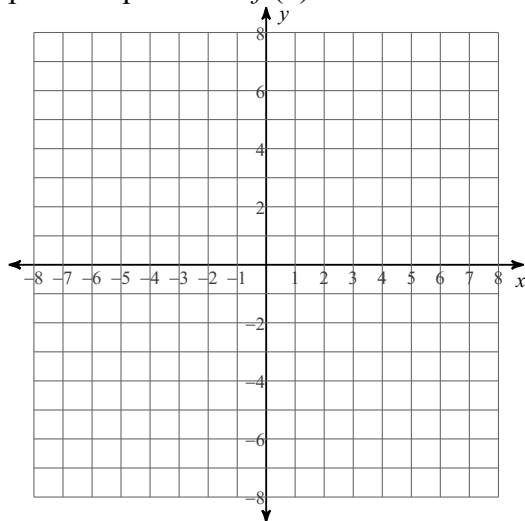
axis of symmetry:

vertex form: $f(x) = (x - 4)^2 - 1$

intercept form: $f(x) = (x - 3)(x - 5)$

standard form: $f(x) = x^2 - 8x + 15$

point on parabola: $f(6) =$



- 8) x-intercepts:
vertex: $(4, -9)$

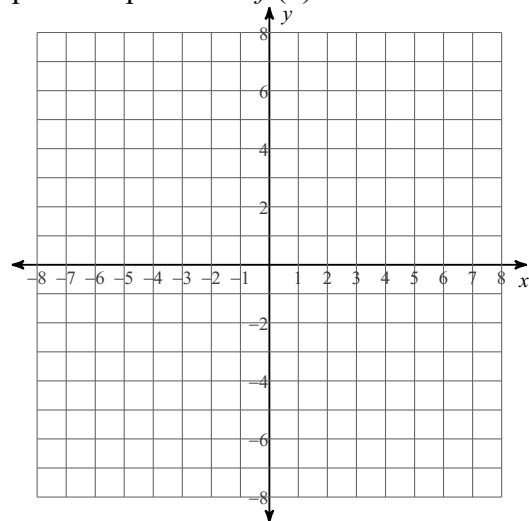
axis of symmetry:

vertex form: $f(x) = (x - 4)^2 - 9$

intercept form: $f(x) = (x - 1)(x - 7)$

standard form: $f(x) = x^2 - 8x + 7$

point on parabola: $f(6) =$



9) x-intercepts:

vertex:

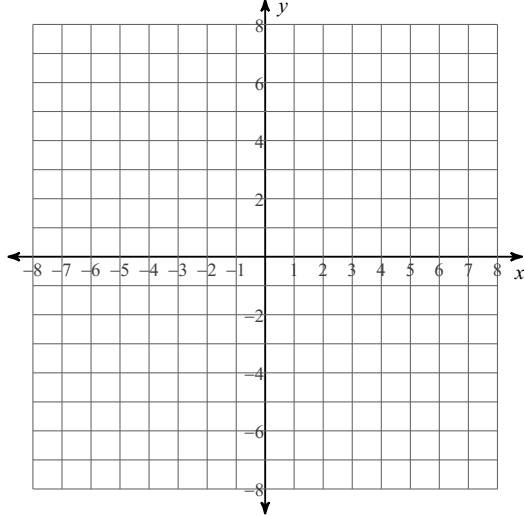
axis of symmetry:

vertex form: $f(x) = (x + 3)^2 - 4$

intercept form: $f(x) = (x + 5)(x + 1)$

standard form: $f(x) = x^2 + 6x + 5$

point on parabola: $f(0) =$



10) x-intercepts:

vertex:

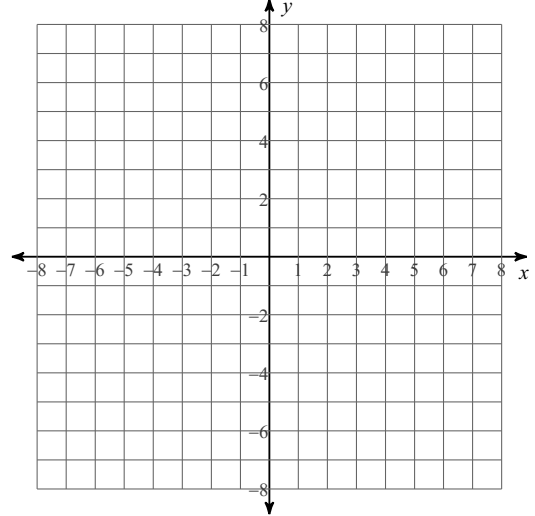
axis of symmetry:

vertex form: $f(x) = (x + 5)^2 - 1$

intercept form: $f(x) = (x + 6)(x + 4)$

standard form: $f(x) = x^2 + 10x + 24$

point on parabola: $f(-7) =$



11) x-intercepts:

vertex:

axis of symmetry:

vertex form: $f(x) = (x - 1)^2$

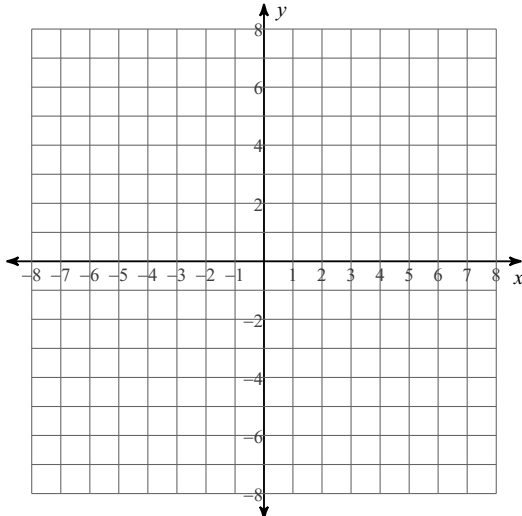
intercept form: $f(x) = (x - 1)(x - 1)$

standard form: $f(x) = x^2 - 2x + 1$

point on parabola: $f(0) = 1$

point on parabola: $f(1) = 0$

point on parabola: $f(2) = 1$



12) x-intercepts:

vertex:

axis of symmetry:

vertex form: $f(x) = (x - 4)^2 - 4$

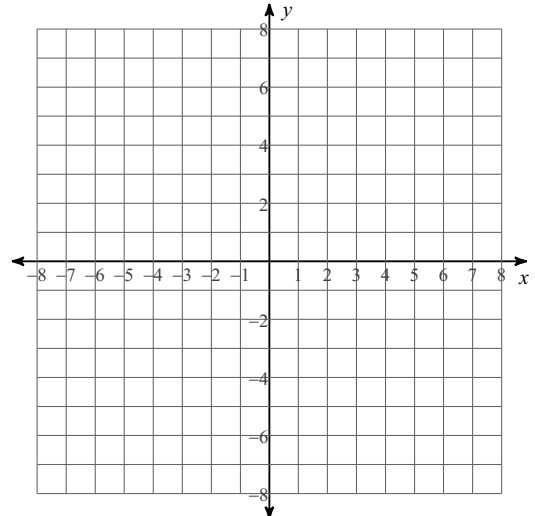
intercept form: $f(x) = (x - 2)(x - 6)$

standard form: $f(x) = x^2 - 8x + 12$

point on parabola: $f(2) =$

point on parabola: $f(3) =$

point on parabola: $f(5) =$



13) x-intercepts:

vertex:

axis of symmetry:

vertex form: $f(x) = (x + 1)^2 - 1$

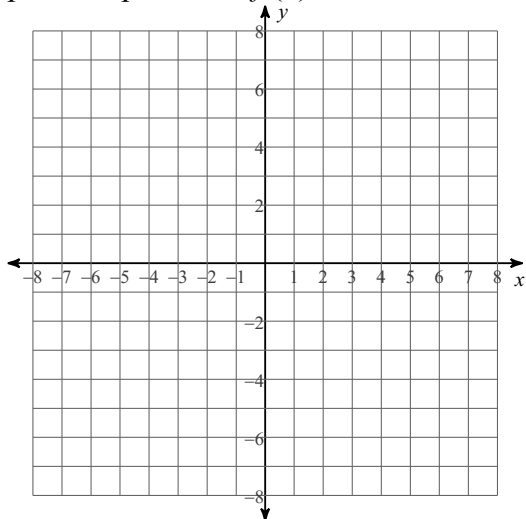
intercept form: $f(x) = (x + 2)(x + 0)$

standard form: $f(x) = x^2 + 2x + 0$

point on parabola: $f(0) =$

point on parabola: $f(1) =$

point on parabola: $f(2) =$



14) x-intercepts:

vertex:

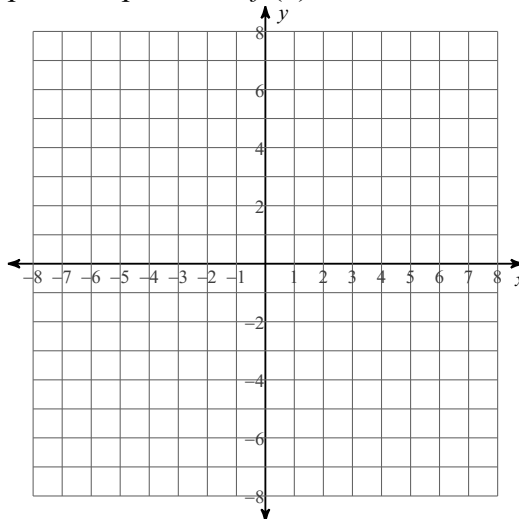
axis of symmetry:

vertex form: $f(x) = (x + 2)^2 - 9$

intercept form: $f(x) = (x + 5)(x - 1)$

standard form: $f(x) = x^2 + 4x - 5$

point on parabola: $f(0) =$



15) x-intercepts:

vertex:

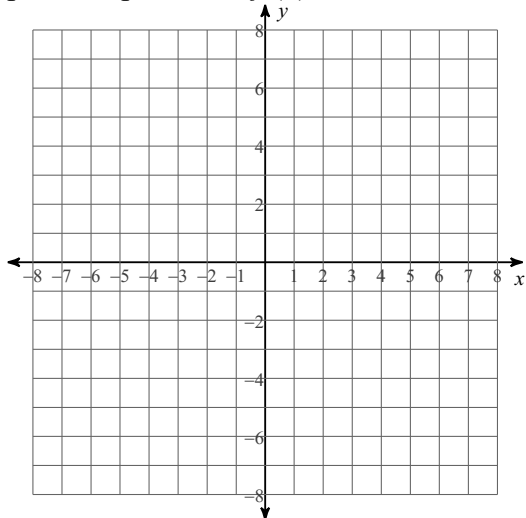
axis of symmetry:

vertex form: $f(x) =$

intercept form: $f(x) = (x - 5)(x - 7)$

standard form: $f(x) = x^2 - 12x + 35$

point on parabola: $f(8) =$



16) x-intercepts:

vertex:

axis of symmetry:

vertex form: $f(x) =$

intercept form: $f(x) =$

standard form: $f(x) =$

point on parabola: $f(-2) =$

