8, 9, 10, 11, 15

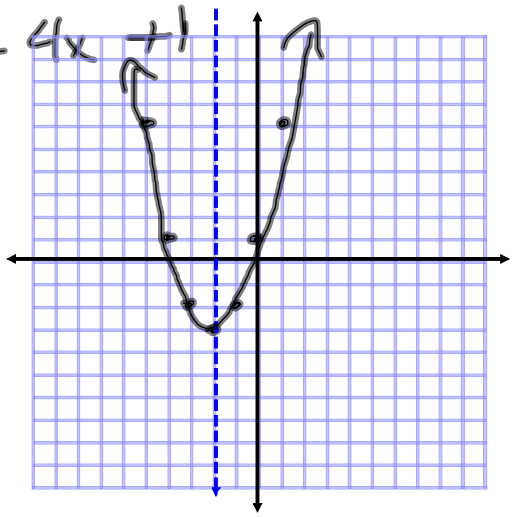
8. $g(x) = x^2 + 4x + 1$

V: $(-2, -3)$

$(-3, -2)$

$(-1, -2)$

$(1, 6)$

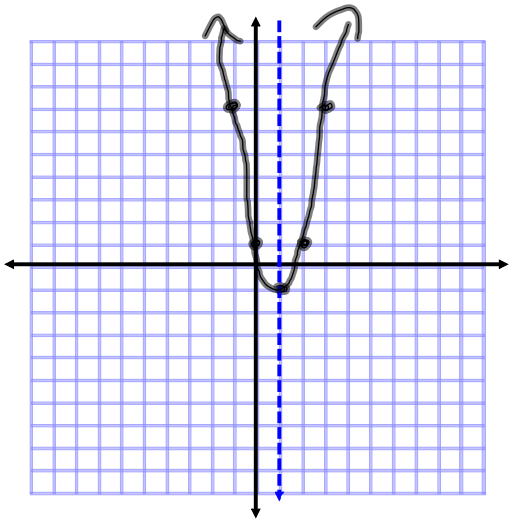


9. $f(x) = 2x^2 - 4x + 1$

V: $(1, -1)$

$(-1, 7)$

$(0, 1)$

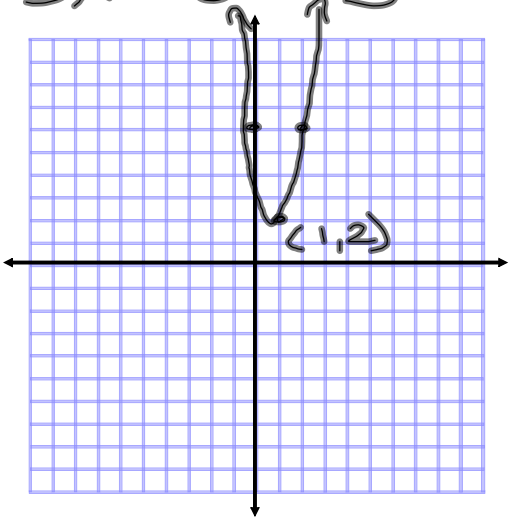


10. $g(x) = 3x^2 - 6x + 5$

V $(1, 2)$

$(0, 5)$

$(2, 5)$



Homework Assessment
4/27

12. $h(x) = 6 - 6x - x^2$

Graph & label vertex

Quiz Topics

-distinguish between quadratic form and parabolic form
    QF: ax^2+bx+c PF: y-k=a(x-h)^2
-Find the vertex
    PF: just look at EQ
    QF: use calculator- min or max
-Find Zeros (x-intercepts)
    -y=0
    -Use the calculator
    -QF: Use the quadratic equation
    -PF: solve by taking a square root
    -there will be 0,1 or 2. Most often 2.
-Find y-intercepts
    -plug in x=0, and solve for y
    -there will only be one
-Determine the nature of the roots
    -use the discriminate the part of the quadratic equation that is under the radical
    $D=b^2-4ac$
    - D=0: One real root - our vertex is on the x-axis
    - D<0: Two Imaginary roots - our graph does not cross the x-axis
    - D>0: Two real roots- the graph crosses the x-axis twice

$$2y + 6x = 34x^2 + 8$$
$$-6x$$
$$\frac{2y}{2} = \frac{34x^2 - 6x + 8}{2}$$
$$y = 16x^2 - 3x + 4$$

Find zeros/roots ← x-ints

$$0 = 16x^2 - 3x + 4$$

$a = 16 \quad b = -3 \quad c = 4$

$$x = \frac{+3 \pm \sqrt{9 - 4ac}}{2a}$$