

Algebra II

Sect. 5-5 & 5-6 Review

Name _____

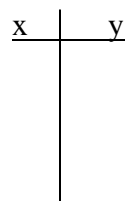
For the following problems, name the vertex, axis of symmetry and direction of opening, then fill in the blank x/y-chart with the vertex and two other “sensible” sets of coordinates.

1) $y = (x + 12)^2 - 8$

Vertex: _____

a.o.s.: _____

up/down: _____

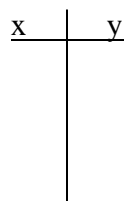


2) $y = -2(x - 5)^2 + 11$

Vertex: _____

a.o.s.: _____

up/down: _____

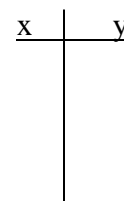


3) $y = \frac{1}{2}(x - 4)^2 - 1$

Vertex: _____

a.o.s.: _____

up/down: _____



For the following problems, first change them into “vertex form”, then provide the information requested.

4) $y = x^2 - 14x + 51$

Vertex: _____

a.o.s.: _____

up/down: _____

5) $y = -13x^2 - 1$

Vertex: _____

a.o.s.: _____

up/down: _____

6) $y = x^2 + 2x - 9$

Vertex: _____

a.o.s.: _____

up/down: _____

Write an equation in “vertex form” for the parabola with the given vertex and point.

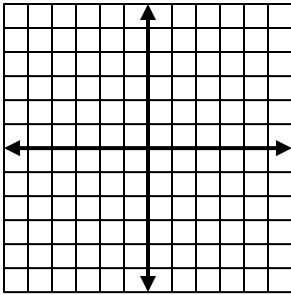
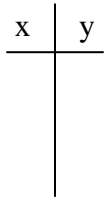
7) V(-8, 9)
P(-5, -9)

8) V(2, -2)
P(3, 3)

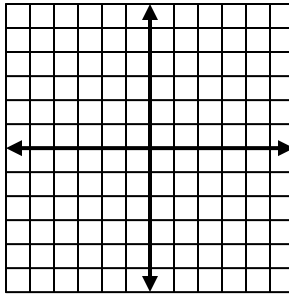
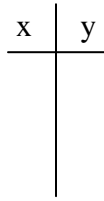
9) V(0, 15)
P(4, 11)

Graph the following equations on the grids provided.

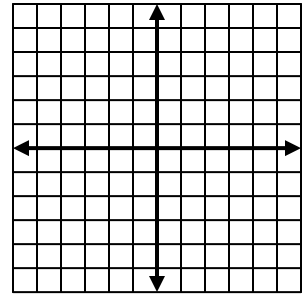
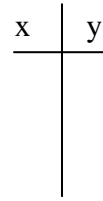
10) $y = (x - 4)^2 - 5$



11) $y = -(x + 2)^2 + 4$

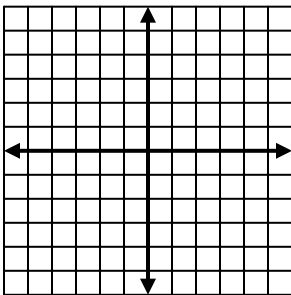
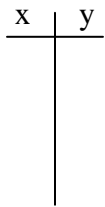


12) $y = -2x^2 + 6$

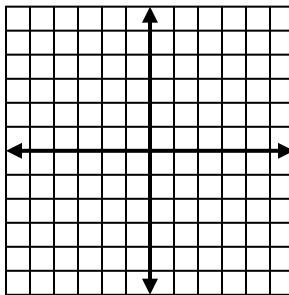
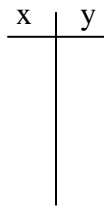


Graph the inequalities. Remember, same as 10-12, but shaded with dashed or solid lines!

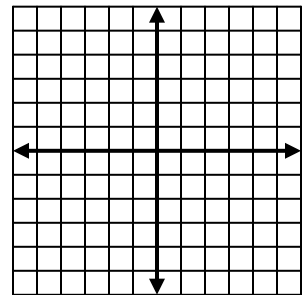
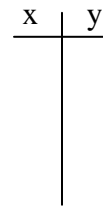
13) $y > (x - 1)^2 - 1$



14) $y \geq -2(x + 3)^2 + 6$



15) $y < x^2 - 1$



Change this last problem to “vertex form” first, then graph it.

16) $y = x^2 - 4x - 2$

