Algebra 2
Unit: Conic Sections
Section: Parabolas

Flash Cards: Graphing a Parabola with a Vertex at (h, k)

Directions: Graph the following parabolas.

1. Graph: y minus 1 equals one-eighth times the quantity x minus 2 squared

2. Graph: x minus 1 equals negative one-eighth times the quantity y minus 2 squared

3. Graph: y minus 3 equals negative one-fourth times the quantity x plus 1 squared

4. Graph: x minus 3 equals one-fourth times the quantity y plus 1 squared

Answers:

1. the graph has a vertex at (2, 1), directrix as y equals negative 1, focus at (2, 3) and opens up

2. the graph has a vertex at (1, 2), directrix as x equals 3, focus at (negative 1, 2) and opens left

3. the graph has a vertex at (negative 1, 3), directrix as y equals 4, focus at (negative 1, 2) and opens down

4. the graph has a vertex at (3, negative 1), directrix as x equals 2, focus at (4, negative 1) and opens right