

Use the information provided to write the vertex form equation of each parabola.

5) Vertex: $(-9, -7)$, Focus: $(-3, -7)$

6) Vertex: $(-6, 3)$, Focus: $(-6, -5)$

7) Vertex: $(-8, 7)$, Directrix: $x = -1$

8) Vertex: $(9, -4)$, Directrix: $y = 2$

9) Focus: $(-4, -9)$, Directrix: $x = 6$

10) Focus: $(6, -2)$, Directrix: $y = -8$

11) Vertex: $(-5, -6)$, axis of symmetry: $x = -5$,
length of latus rectum = $\frac{1}{2}$, $a < 0$

12) Vertex: $(6, -2)$, axis of symmetry: $y = -2$,
length of latus rectum = 11, $a < 0$

13) Opens up or down, Vertex: $(1, 5)$, Passes through: $(4, 8)$

14) Opens left or right, Vertex: $(-7, 9)$, Passes through: $(2, 6)$

15) Opens up or down, and passes
through $(4, -4)$, $(5, -9)$, and $(6, -16)$

16) Opens up or down, and passes
through $(-9, -5)$, $(-5, -21)$, and $(-10, -11)$