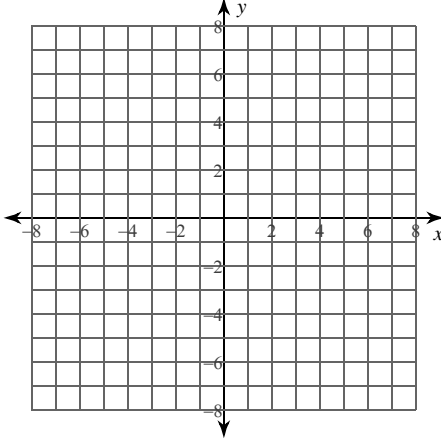


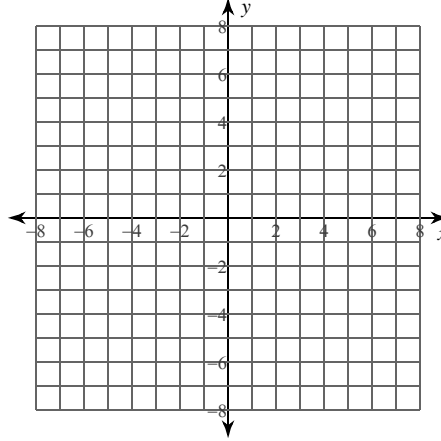
Algebra II Practice G.GPE.A.2 Graphing Quadratic Functions 2b

Identify the vertex, focus, and directrix of each. Then sketch the graph.

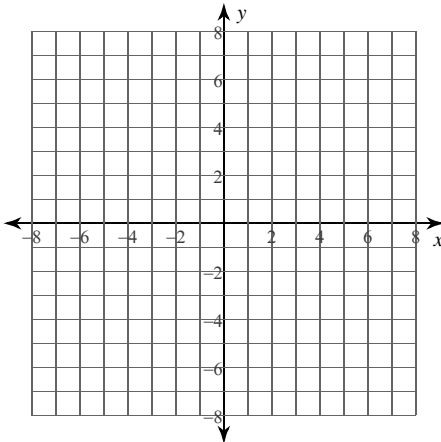
1) $y = \frac{1}{4}x^2 - \frac{3}{2}x - \frac{7}{4}$



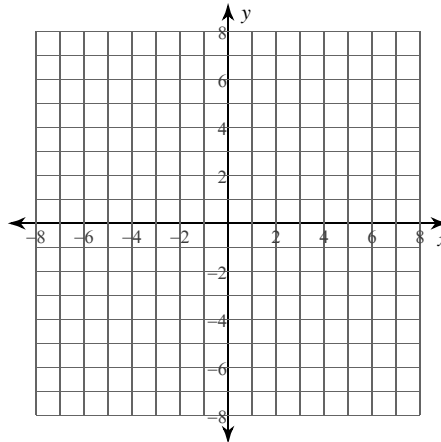
2) $y = -\frac{1}{4}x^2 - x - 4$



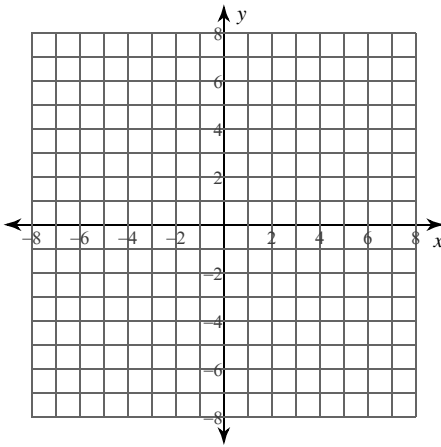
3) $f(x) = \frac{1}{4}(x - 4)^2 + 3$



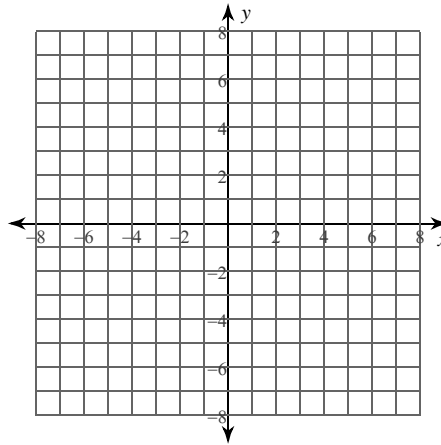
4) $f(x) = -\frac{1}{2}(x + 5)^2 + 4$



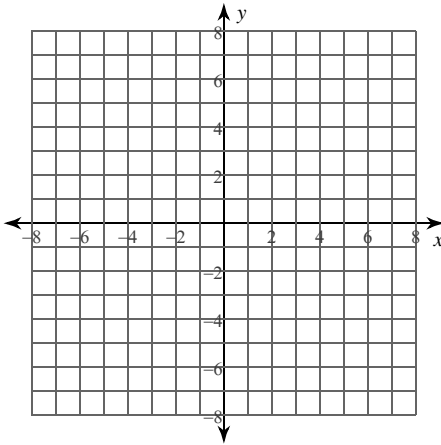
5) $y = -(x - 5)(x - 2)$



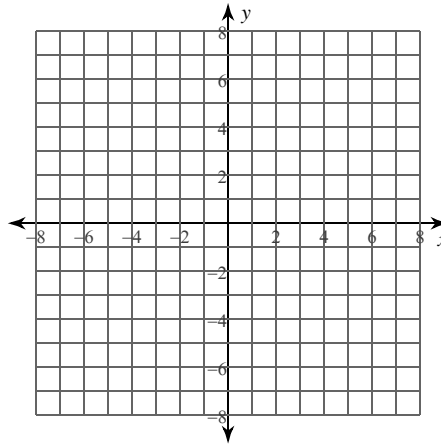
6) $y = (x + 6)(x + 2)$



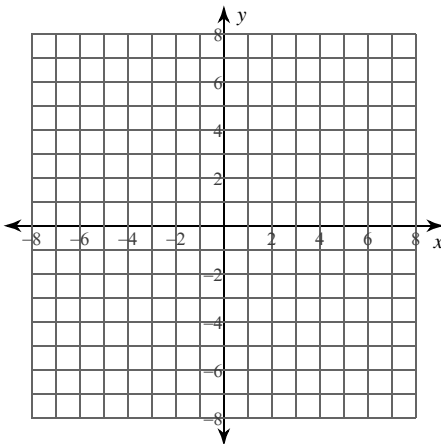
7) $y + 4 = (x - 1)^2$



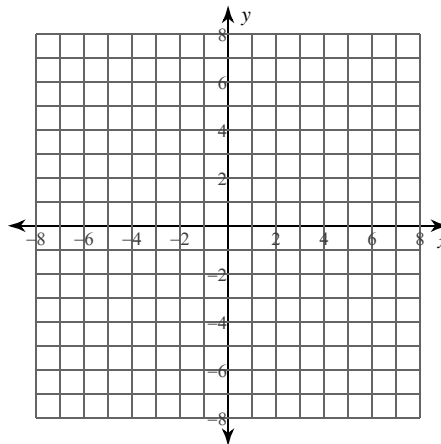
8) $-4(y - 2) = (x + 1)^2$



9) $-x^2 + 10x + 3y - 25 = 0$



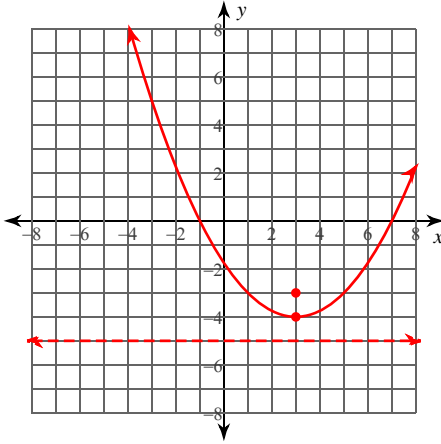
10) $x^2 + 10x + 4y + 25 = 0$



Algebra II Practice G.GPE.A.2 Graphing Quadratic Functions 2b

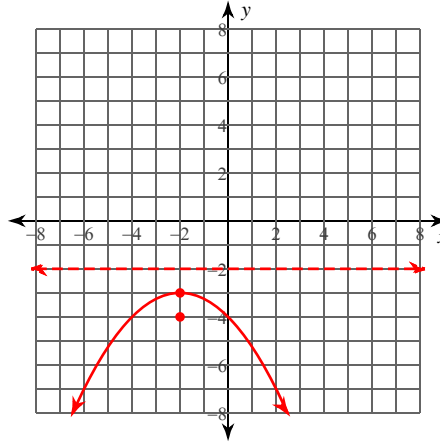
Identify the vertex, focus, and directrix of each. Then sketch the graph.

1) $y = \frac{1}{4}x^2 - \frac{3}{2}x - \frac{7}{4}$



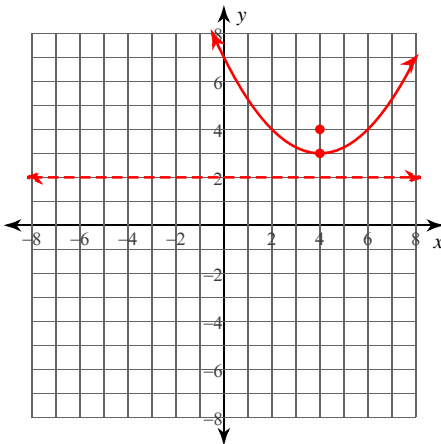
Vertex: (3, -4)
Focus: (3, -3)
Directrix: $y = -5$

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



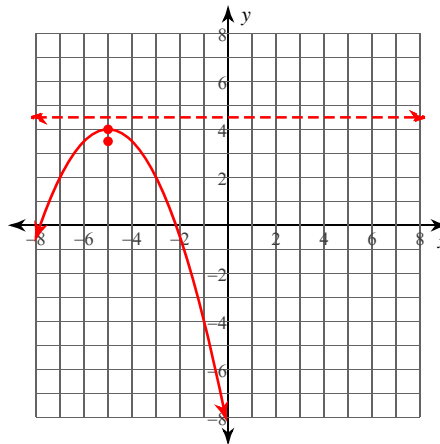
Vertex: (-2, -3)
Focus: (-2, -4)
Directrix: $y = -2$

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



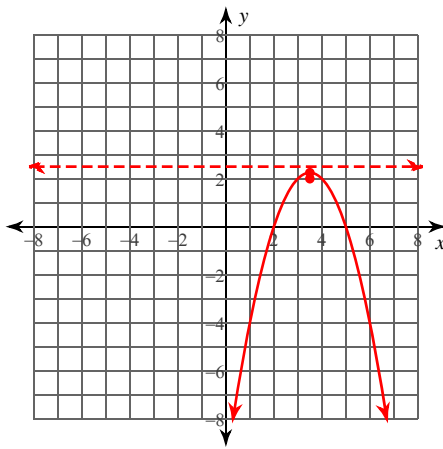
Vertex: (4, 3)
Focus: (4, 4)
Directrix: $y = 2$

4) $f(x) = -\frac{1}{2}(x + 5)^2 + 4$



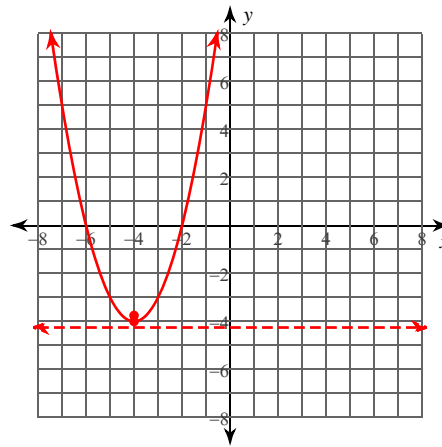
Vertex: (-5, 4)
Focus: $(-5, \frac{7}{2})$
Directrix: $y = \frac{9}{2}$

5) $y = -(x - 5)(x - 2)$



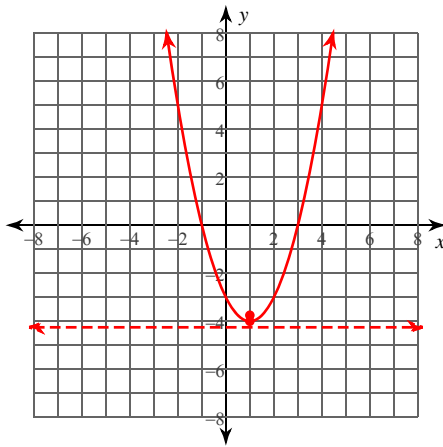
Vertex: $\left(\frac{7}{2}, \frac{9}{4}\right)$
 Focus: $\left(\frac{7}{2}, 2\right)$
 Directrix: $y = \frac{5}{2}$

6) $y = (x + 6)(x + 2)$



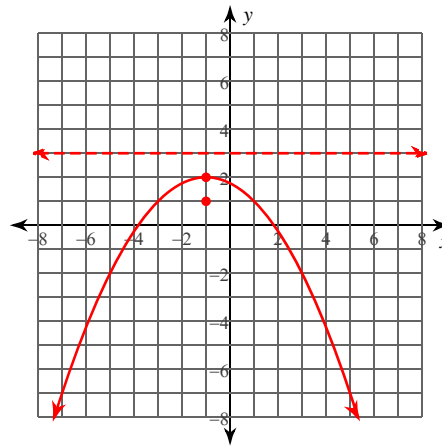
Vertex: $(-4, -4)$
 Focus: $\left(-4, -\frac{15}{4}\right)$
 Directrix: $y = -\frac{17}{4}$

7) $y + 4 = (x - 1)^2$



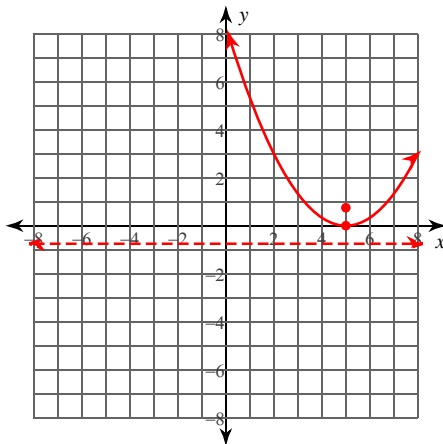
Vertex: $(1, -4)$
 Focus: $\left(1, -\frac{15}{4}\right)$
 Directrix: $y = -\frac{17}{4}$

8) $-4(y - 2) = (x + 1)^2$



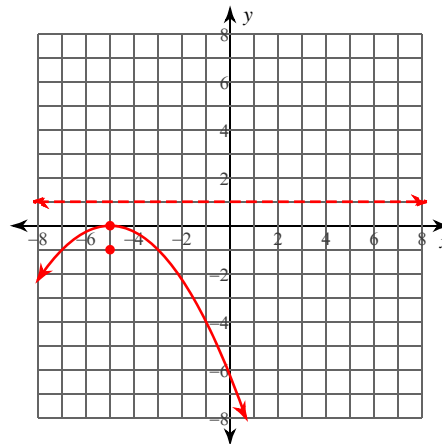
Vertex: $(-1, 2)$
 Focus: $(-1, 1)$
 Directrix: $y = 3$

9) $-x^2 + 10x + 3y - 25 = 0$



Vertex: $(5, 0)$
 Focus: $\left(5, \frac{3}{4}\right)$
 Directrix: $y = -\frac{3}{4}$

10) $x^2 + 10x + 4y + 25 = 0$



Vertex: $(-5, 0)$
 Focus: $(-5, -1)$
 Directrix: $y = 1$