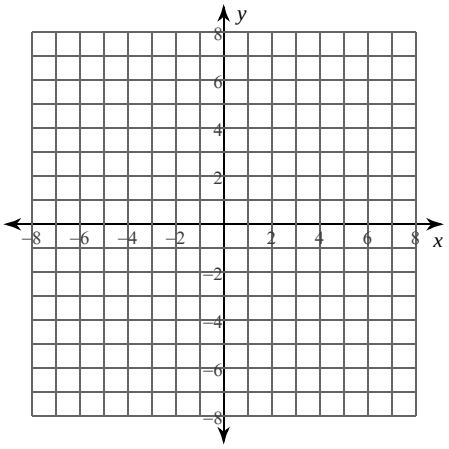
Graphing parabolas 01 Name_____

Daily Work

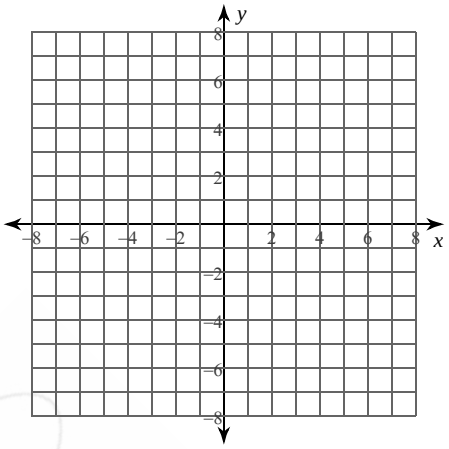
Date_____

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

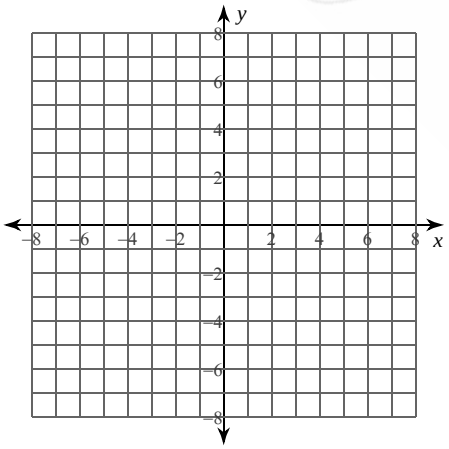
1) $x = y^2$



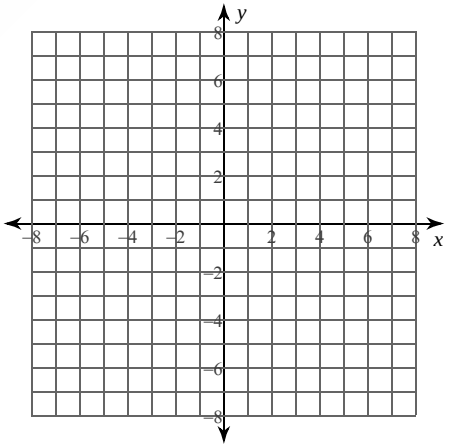
2) $y = -x^2$



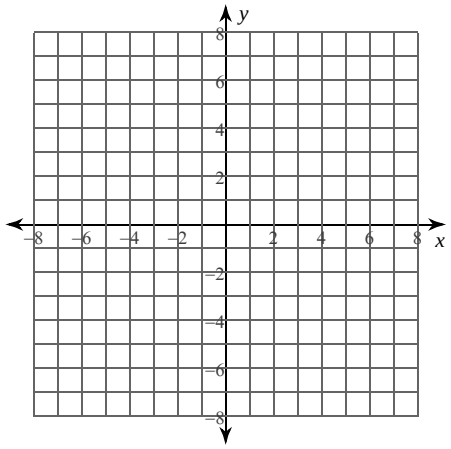
3) $y = x^2$



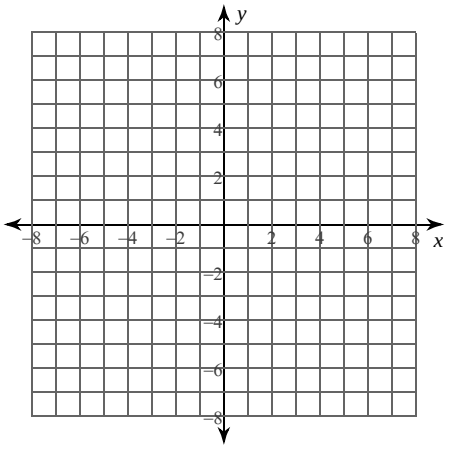
4) $y = \frac{1}{3}x^2$



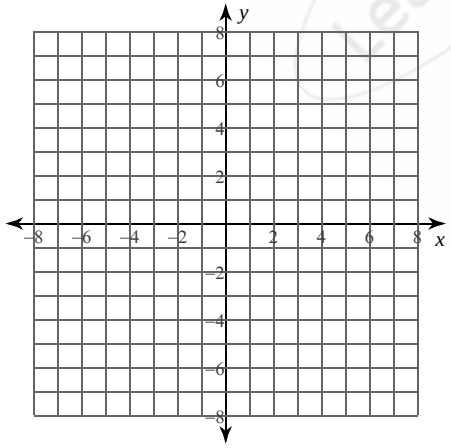
5) $y = -x^2 - 10x - 28$



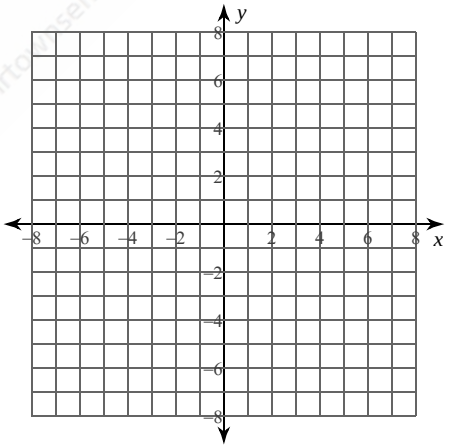
6) $y = 2x^2 - 16x + 27$



7) $y = 3x^2 + 12x + 6$

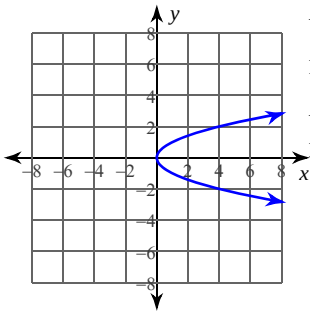


8) $y = -\frac{1}{3}x^2 - 4$



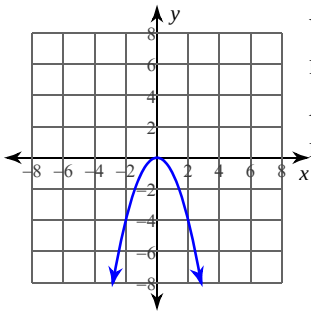
Answers to Daily Work

1)



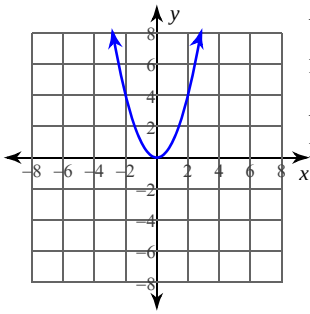
Vertex: $(0, 0)$
Focus: $\left(\frac{1}{4}, 0\right)$
Axis of Sym.: $y = 0$
Directrix: $x = -\frac{1}{4}$

2)



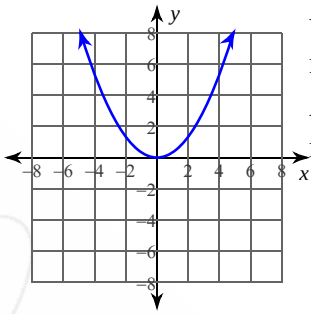
Vertex: $(0, 0)$
Focus: $\left(0, -\frac{1}{4}\right)$
Axis of Sym.: $x = 0$
Directrix: $y = \frac{1}{4}$

3)



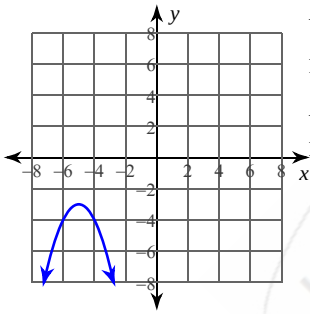
Vertex: $(0, 0)$
Focus: $\left(0, \frac{1}{4}\right)$
Axis of Sym.: $x = 0$
Directrix: $y = -\frac{1}{4}$

4)



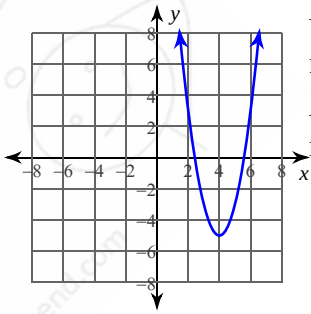
Vertex: $(0, 0)$
Focus: $\left(0, \frac{3}{4}\right)$
Axis of Sym.: $x = 0$
Directrix: $y = -\frac{3}{4}$

5)



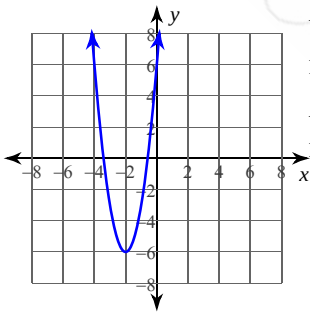
Vertex: $(-5, -3)$
Focus: $\left(-5, -\frac{13}{4}\right)$
Axis of Sym.: $x = -5$
Directrix: $y = -\frac{11}{4}$

6)



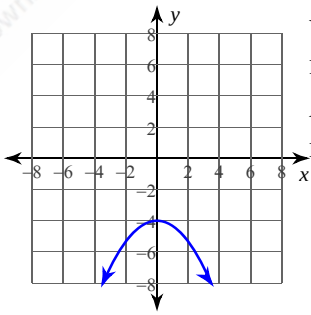
Vertex: $(4, -5)$
Focus: $\left(4, -\frac{39}{8}\right)$
Axis of Sym.: $x = 4$
Directrix: $y = -\frac{41}{8}$

7)



Vertex: $(-2, -6)$
Focus: $\left(-2, -\frac{71}{12}\right)$
Axis of Sym.: $x = -2$
Directrix: $y = -\frac{73}{12}$

8)



Vertex: $(0, -4)$
Focus: $\left(0, -\frac{19}{4}\right)$
Axis of Sym.: $x = 0$
Directrix: $y = -\frac{13}{4}$