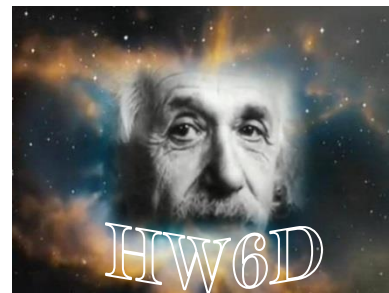


For each parabola, give the coordinates of its vertex, focus and the equation of its directrix.



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

2)  $x = -\frac{1}{12}y^2$

3)  $y = -2x^2$

4)  $x = y^2 + 1$

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

6)  $y = \frac{1}{8}(x - 5)^2 - 3$

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

Find an equation for each parabola described.

8) Focus (-1, 0); directrix:  $x = 1$

9) Focus (0, 0.25); directrix:  $y = -0.25$

10) Vertex (0, 0); focus (0, -0.25)

11) Vertex (0, 0); focus (5, 0)

12) Vertex (0, 0); directrix:  $y = -2$

13) Focus (3, 0); directrix:  $x = -3$

14) Vertex (6, 2); focus (6, 3)

15) Focus (-4.5, -3); directrix:  $x = -3.5$

Find the vertex, focus and directrix of each parabola.

16)  $x = 2y^2 - 8y + 3$

17)  $4y = x^2 - 8x + 12$

1) V(0, 0) F(0, 2) $y = -2$	4) V(1, 0) F(1.25, 0) $x = 0.75$	7) V(4, 7) F(4.25, 7) $x = 3.75$	14) $y - 2 = 1/4(x - 6)^2$
2) V(0, 0) F(-3, 0) $x = 3$	5) V(2, 1) F(2, 2) $y = 0$	8) $x = -1/4y^2$	15) $x + 4 = -1/2(y + 3)^2$
3) V(0, 0) F(0, -1/8) $y = 1/8$	6) V(5, -3) F(5, -1) $y = -5$	9) $y = x^2$	16) V(-5, 2) F(-4.875, 2) $x = -5.125$
		10) $y = -x^2$	17) V(4, -1) F(4, 0) $y = -2$
		11) $x = 1/20y^2$	
		12) $y = 1/8x^2$	
		13) $x = 1/12y^2$	