Section 1.9 & 9.1-9.4 Extra Practice

Find the vertex, focus, and directrix of the parabola:

1) $4(x+3)+(y-6)^2=0$

Find the vertex, focus, directrix, and graph the parabola:
State the domain & range in interval notation.

2) $y^2+4y-4x+16=0$

Find the equation of the specified parabola

3) V (-2, 1) F (-2, 4)

4) F (-2, -2), directrix is $x=3$

Find the center, foci, vertices, eccentricity, and graph the ellipse.
State the domain & range in interval notation.

5) $9x^2+4y^2-54x-32y+109=0$

Find the equation of the specified ellipse.

6) V (± 7, 0), F (± 2, 0)

7) V (0, ± 6) eccentricity is 1/3

Find the center, vertices, foci, equation of the asymptotes, and graph the hyperbola
State the domain & range in interval notation.

8) $\frac{y^2}{36}-\frac{x^2}{4}=1$

Find the equation of the specified hyperbola.

9) V (0, ± 5), F (0, ± 9)

10) Find the standard form of the equation of the ellipse. Find the center, vertices, foci, and eccentricity. Sketch the ellipse.

Section 1.9 & 9.1-9.4 Extra Practice ANSWERS:

1) $(y-6)^2 = -4(x+3)$

V $(-3, 6)$

F $(-4, 6)$

$x = -2$

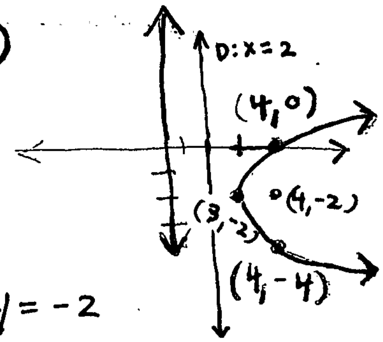
2. $(y+2)^2 = 4(x-3)$

V $(3, -2)$

F $(4, -2)$

$x = 2$

AOS: $y = -2$



D: $[3, \infty)$

R: $(-\infty, \infty)$

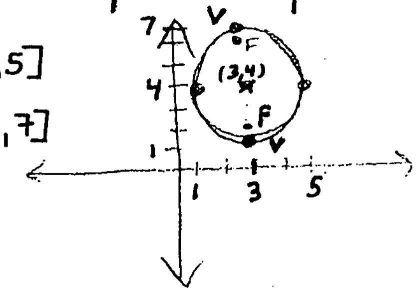
3) $(x+2)^2 = 12(y-1)$

4) $(y+2)^2 = -10(x-\frac{1}{2})$

5) $\frac{(x-3)^2}{4} + \frac{(y-4)^2}{9} = 1$

D: $[1, 5]$

R: $[1, 7]$



C: $(3, 4)$

V: $(3, 7)$, $(3, 1)$ CV: $(1, 4)$; $(5, 4)$

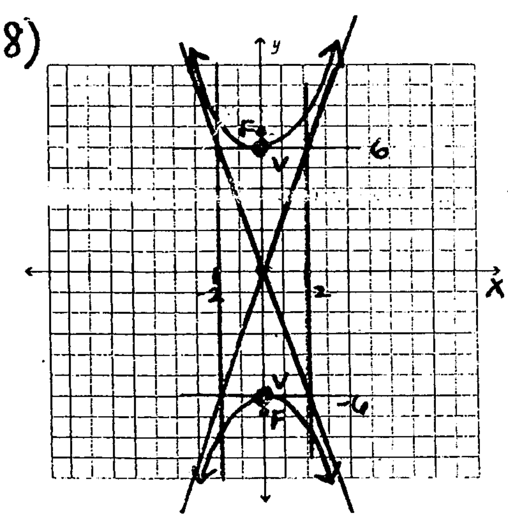
F: $(3, 4 \pm \sqrt{5})$

e: $\sqrt{5}/3$

6) $\frac{x^2}{49} + \frac{y^2}{45} = 1$

7) $\frac{x^2}{32} + \frac{y^2}{36} = 1$

8)



C: $(0, 0)$

V: $(0, \pm 6)$

F: $(0, \pm 2\sqrt{10})$

asymptotes: $y = \pm 3x$

D: $(-\infty, \infty)$

R: $(-\infty, -6] \cup [6, \infty)$

9) $\frac{y^2}{25} - \frac{x^2}{56} = 1$

10. (a) $\frac{(x-1)^2}{\frac{25}{16}} + (y+1)^2 = 1$

(b) Center: $(1, -1)$

Vertices: $\left(\frac{9}{4}, -1\right), \left(-\frac{1}{4}, -1\right)$

Foci: $\left(\frac{7}{4}, -1\right), \left(\frac{1}{4}, -1\right)$

Eccentricity: $\frac{3}{5}$

(c)