Precalculus - Mr. C. - All work on looseleaf. Name_____

Q4HW2

Date_____ Period____

Use the information provided to write the standard form equation of each circle.

1) Center: $(-9, -1)$
Radius: 3

2) Center: $(13, -8)$
Radius: 2

3) $x^2 + y^2 + 12x - 6y - 36 = 0$

4) $x^2 + y^2 + 30x - 28y + 420 = 0$

Use the information provided to write the standard form equation of each ellipse.

5) $4x^2 + 9y^2 - 54y - 63 = 0$

6) $4x^2 + 9y^2 - 80x + 76 = 0$

Identify the center, vertices, and co-vertices of each ellipse.

7) $\frac{(x-2)^2}{64} + \frac{(y-5)^2}{49} = 1$

8) $\frac{(x+6)^2}{100} + \frac{(y-3)^2}{9} = 1$

Use the information provided to write the standard form equation of each hyperbola.

9) $9x^2 - 4y^2 + 8y - 148 = 0$

10) $-4x^2 + 9y^2 + 40x - 126y + 17 = 0$

11) $4x^2 - y^2 - 24x + 18y - 241 = 0$

12) $x^2 - y^2 - 14x - 18y - 48 = 0$

Identify the vertices and direction of opening of each hyperbola.

13) $\frac{(x+1)^2}{9} - \frac{(y+6)^2}{169} = 1$

14) $\frac{(x-8)^2}{95} - \frac{(y+7)^2}{75} = 1$

Identify the asymptotes of each hyperbola.

15) $\frac{(y-8)^2}{140} - \frac{(x+2)^2}{180} = 1$

16) $\frac{(x+1)^2}{144} - \frac{(y-6)^2}{81} = 1$

Identify the vertices and foci of each. Then sketch the graph.

17) $\frac{(x+1)^2}{9} + \frac{(y+3)^2}{16} = 1$

Identify the vertices, foci, and asymptotes of each. Then sketch the graph.

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

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