

10.1 – 10.3 REVIEW

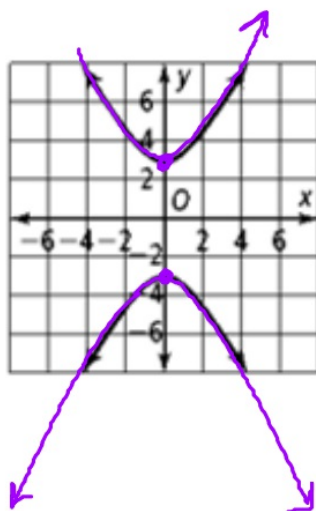
Algebra II B (E. Gervais)

Name:

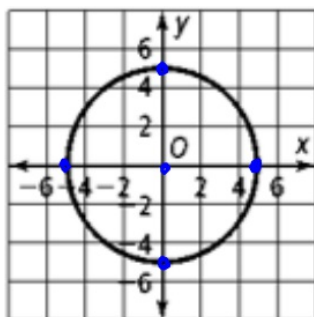
Hr:

State the Conic section graphed below. Then state the domain and range for each.

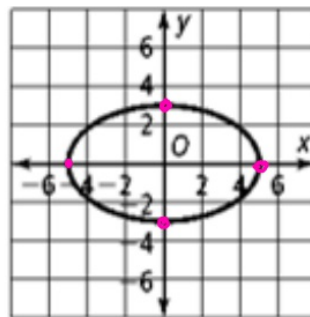
1.



2.



3.



- Hyperbola
D: \mathbb{R}
R: $\mathbb{R} \geq 3$ or $\mathbb{R} \leq -3$
- Circle
D: $-5 \leq \mathbb{R} \leq 5$
R: $-5 \leq \mathbb{R} \leq 5$
- Ellipse
D: $-5 \leq \mathbb{R} \leq 5$
R: $-3 \leq \mathbb{R} \leq 3$

Find the focus and directrix of the equation below.

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

$$a = \frac{1}{4c}$$

$$\frac{1}{3} = \frac{1}{4c}$$

$$\frac{4c}{4} = \frac{3}{4}$$

$$c = \frac{3}{4}$$

4. $C = (0, \frac{3}{4})$
Directrix: $y = -\frac{3}{4}$

5. Write the equation of the parabola given the focus $(-6, 0)$.

$$x = ay^2$$

$$a = \frac{1}{4(-6)} = \frac{1}{-24}$$

$$\text{directrix} = x = 6$$



5. $x = -\frac{1}{24}y^2$

Use the given information to write the equation of the circle.

6. radius of 3, center $(-8, 4)$
 $r = 3$

6. $(x+8)^2 + (y-4)^2 = 9$

Use the transformations given to write the equation of the circle.

7. $x^2 + y^2 = 16$; right 6 units and down 4 units $(6, -4)$
 $h = 6$ $k = -4$

7. $(x-6)^2 + (y+4)^2 = 16$

Graph the equation. State the center and radius.

8. $(x - 4)^2 + (y + 2)^2 = 25$

Center: $(4, -2)$

$\sqrt{r^2} = \sqrt{25}$

$r = 5$

8. center: $(4, -2)$
 $r = 5$

