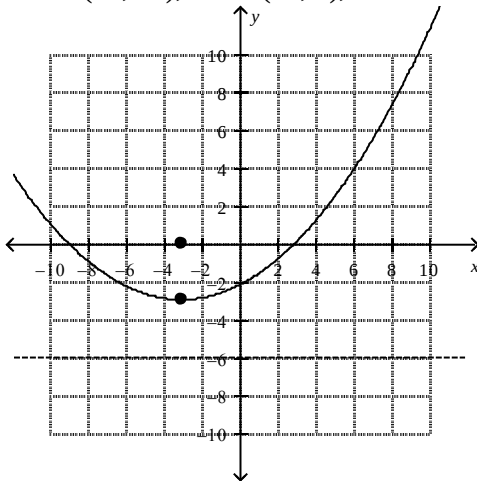
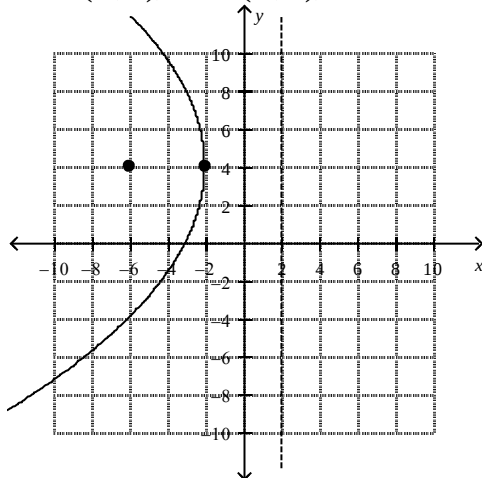


Chapter 10 Review – SOLUTIONS

1. $\frac{z+5}{z+8}; z \neq -4, z \neq -8$
2. $\frac{d^2-d}{d-5}, d \neq -5, 0, 5$
3. $\frac{(x+4)(x-5)}{x-1}, x \neq -2, 1, 5$
4. $\frac{t+5}{t+2}$
5. $\frac{c+11}{c-1}$
6. $\frac{1}{2}$
7. 3.3 mi/h downstream, 1.3 mi/h upstream
8. $x = \frac{1}{40}y^2$
9. $y = -\frac{1}{12}x^2$
10. $y = -\frac{1}{20}x^2$
11. focus (6, 0), directrix at $x = -6$
12. vertex (-3, -3), focus (-3, 6), directrix at $y = -6$



13. vertex (-2, 4), focus (-6, 4), directrix at $x = 2$

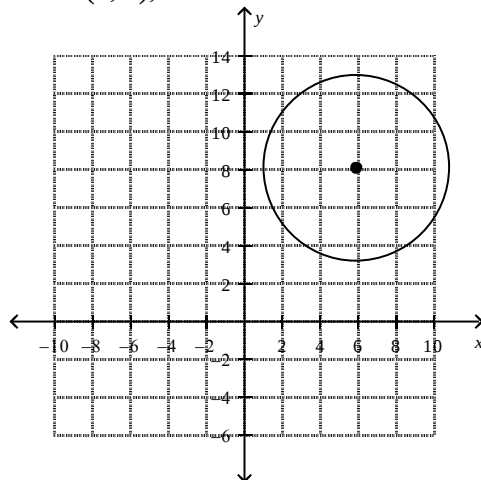


$$14. (x-5)^2 + (y-6)^2 = 64$$

$$15. (x-8)^2 + (y-2)^2 = 49$$

$$16. (-5, 5); 7$$

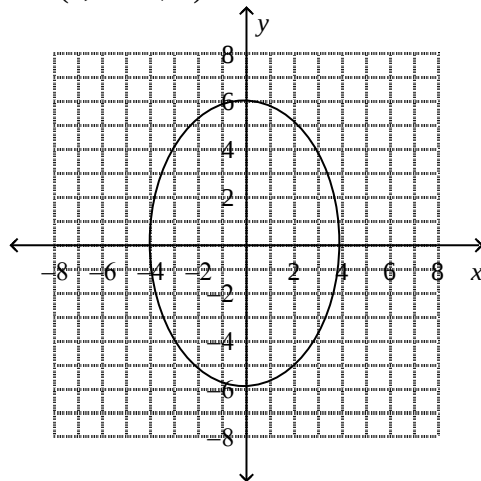
$$17. \text{center } (6, 8); \text{radius} = 5$$



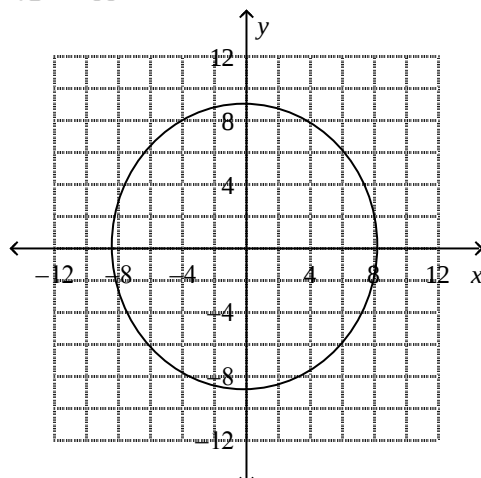
$$18. \frac{x^2}{4} + \frac{y^2}{25} = 1$$

$$19. \frac{x^2}{961} + \frac{y^2}{144} = 1$$

$$20. \text{foci } (0, \pm 2\sqrt{5})$$

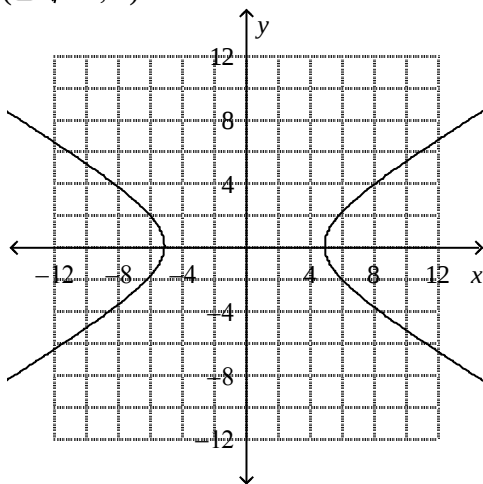


$$21. \frac{x^2}{72} + \frac{y^2}{81} = 1$$



22. vertices: $(\pm 4, 0)$, foci: $(\pm \sqrt{41}, 0)$

23. $(\pm \sqrt{34}, 0)$



24. $\frac{x^2}{204,304} - \frac{y^2}{380,921} = 1$

25. $\frac{(x-3)^2}{9} + \frac{(y-3)^2}{36} = 1$

26. $\frac{(x+2)^2}{9} - \frac{(y-4)^2}{16} = 1$

27. $\frac{(y+3)^2}{16} - \frac{(x-3)^2}{48} = 1$

28. ellipse with center $(3, -5)$, foci at $(3 \pm \sqrt{10}, -5)$

29. parabola; vertex $(3, 5)$

30. hyperbola with center $(-2, -4)$, foci at $(-2 \pm \sqrt{17}, -4)$

31. parabola; vertex $(-2, -4)$

32. circle; center $(5, 4)$; radius = 3

33. hyperbola with center $(4, 2)$, foci at $(4 \pm \sqrt{7}, 2)$