

Answers for Lesson 9-3 Exercises

2. none

4. $x = 2, x = 3$

6. $x = -\frac{7}{2}, x = 1$

8. none

10. vertical asymptote at $x = -2$

12. vertical asymptotes at $x = -\frac{3}{2}$ and $x = 1$

14. hole at $x = -2$

16. holes at $x = \pm 3$

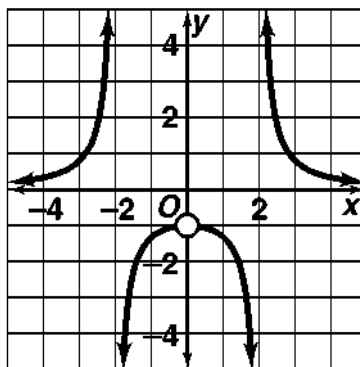
18. vertical asymptote at $x = -5$, hole at $x = -\frac{2}{3}$

20. $y = 0$

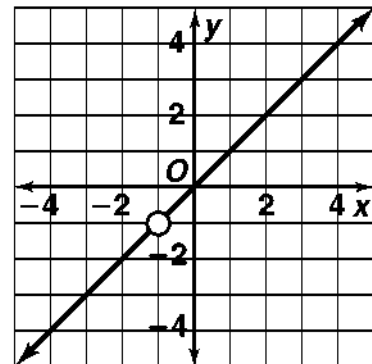
22. $y = \frac{1}{2}$

24. $y = \frac{3}{4}$

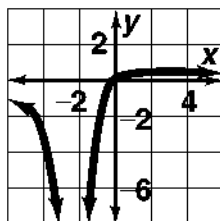
26.

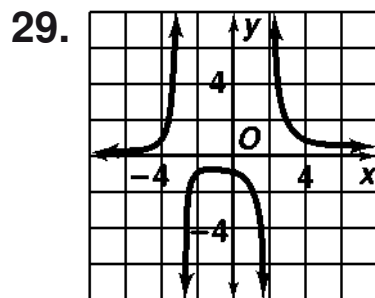


28.

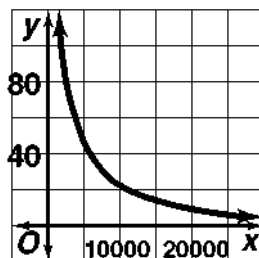


30.





31. a. $y = \frac{0.19x + 210,000}{x - 500}$



b. \$46.88; \$14.68

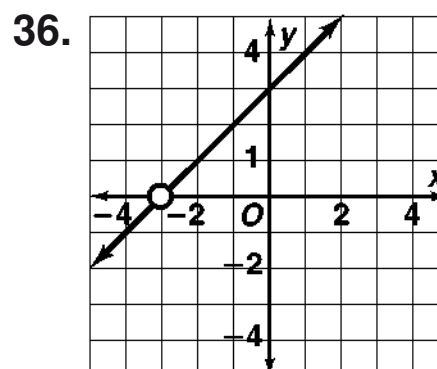
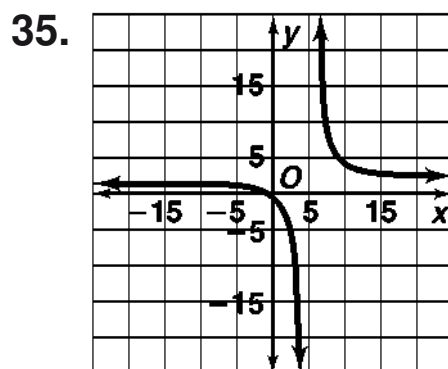
c. more than 21,916 discs

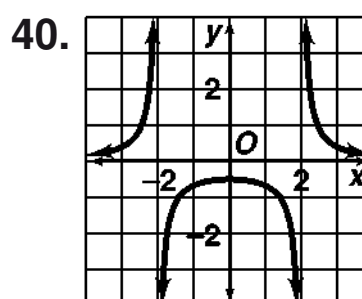
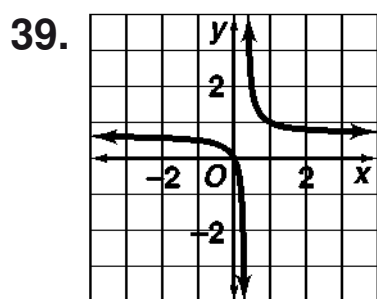
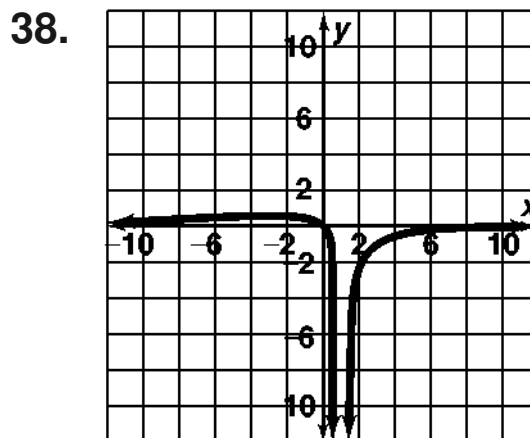
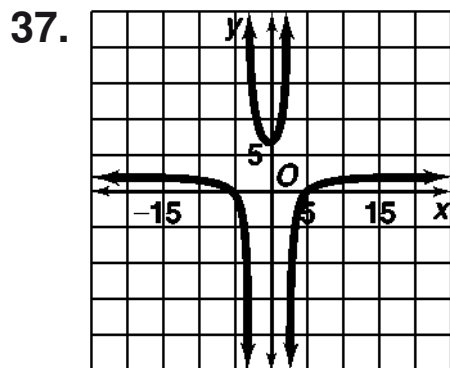
d. $x = 500$, $y = 0.19$

32. vertical asymptotes at $x = -3$ and $x = 3$, horizontal asymptote at $y = 0$

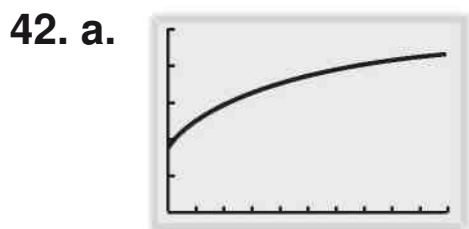
33. vertical asymptote at $x = -2$

34. horizontal asymptote at $y = 0$





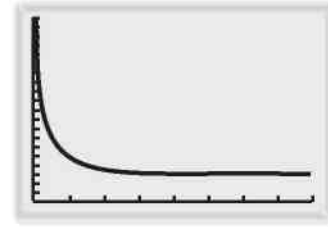
41. Answers may vary. Sample: There is no value of x for which the denominator equals 0.



WINDOW **FORMAT**
 $X_{\min}=0$
 $X_{\max}=100$
 $X_{\text{scl}}=10$
 $Y_{\min}=.5$
 $Y_{\max}=1$
 $Y_{\text{scl}}=.1$

b. 6 free throws

43. a. $y = \frac{20,000x + 200,000}{x + 1}$



WINDOW FORMAT
 Xmin=0
 Xmax=40
 Xscl=4
 Ymin=0
 Ymax=200000
 Yscl=10000

b. \$65,000; \$25,806.45

c. Answers may vary. Sample: No; the president's salary throws off the average; the median or mode would be a better measure.

44. a. $P(n) = 4n^2$

b. $R(n) = 4n + 1$

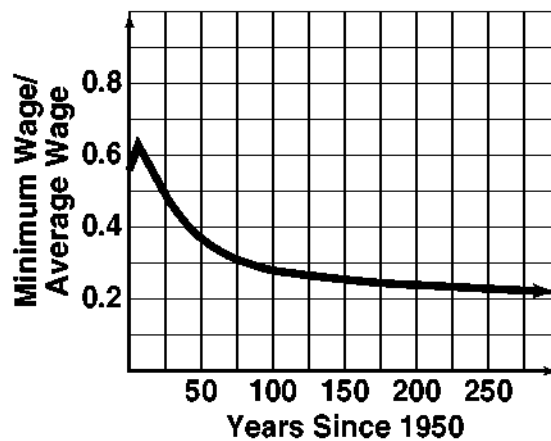
c. $y = \frac{4n^2}{4n + 1}$; $\frac{64}{17}$ check students' work.

45. a. The increase in production workers' average hourly wage is greater.

b. rational

c. $R(x) = \frac{M(x)}{A(x)}$

d.



around the year 2106