

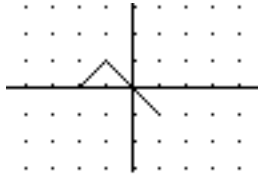
College Algebra

Answers to Review for Test #2

1. Check these by graphing the function on your calculator.

2. a. $y = -4|x + 3| + 5$ b. $y = -\frac{3}{x}$

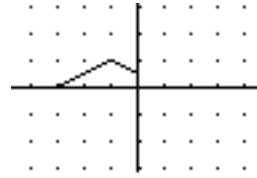
3. a.



b.



c.



4. a. $-5/18$ b. $\frac{3x^2 - x + 2}{3x(x + 1)}$ c. $4/9$ d. $\frac{2(x + 1)}{3(x - 1)}$ e. $\frac{2 - 3x}{2 + 3x}$

5. $f(x) = \frac{x}{x + 1}$, $g(x) = x^2$

7. a. $y = -4$ b. $x = 1$ c. $y - 7 = \frac{3}{5}(x + 2)$ d. $y - 1 = -\frac{2}{5}(x + 3)$

8. a. $\left(-\frac{1}{2}, \frac{7}{2}\right)$ b. $y = -2\left(x + \frac{1}{2}\right)^2 + \frac{7}{2}$ c. $(0, 3)$, $\left(\frac{-1 + \sqrt{7}}{2}, 0\right)$, $\left(\frac{-1 - \sqrt{7}}{2}, 0\right)$

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

10. a. No c. $y = 2.07x + 292.89$ or $\text{Sales} = 2.07 \cdot \text{Advertising} + 292.89$

d. The Sales increases \$2070 for every \$1000 spent on Advertising.

e. Approximately \$30,000

11. a. 1600 in^3 b. $V(x) = 100x(12 - 2x)$ c. 3 d. 1800 in^3