

Challenge: Skills and Applications

For use with pages 79–85

For Exercises 1–6, let $a > 0$, $b < 0$, $c > 0$, and $a > c$. Indicate whether each difference is *positive*, *negative*, or *zero*.

1. $a - b$

2. $c - a$

3. $a - (-a)$

4. $b - (-b)$

5. $b - c$

6. $-a - (-c)$

For Exercises 7–10, evaluate the function for these values of x : $-1\frac{1}{3}$, $-\frac{2}{3}$, $\frac{1}{3}$, and $1\frac{2}{3}$. Organize your results in a table.

7. $y = 3 - x$

8. $y = x - \frac{1}{6}$

9. $y = 3\frac{1}{12} + x$

10. $y = -x + 5\frac{5}{6} - x$

For Exercises 11–15, use the information in the table.

Manuella's Boutique

<i>Month</i>	<i>Income</i>	<i>Month</i>	<i>Income</i>
January	\$10,472	April	\$6,425
February	-\$5,415	May	\$12,847
March	-\$8,219	June	\$9,147

- Draw a bar graph to visually represent the information. To help in reading your graph, label each bar to show the specific number of dollars it represents.
- Explain how you can use your bar graph to find how much more money Manuella's Boutique earned in April than in March.
- Explain how you can use your bar graph to find how much more money Manuella's Boutique earned in February than in March.
- Show how using the rules for integer computation leads to the same results in Exercises 12 and 13.
- Find the overall profit or loss for Manuella's Boutique in the first half of the year.