

Get Ready!

Lesson 2-1

Evaluating Functions

For each function, find $f(1)$, $f(2)$, $f(3)$, and $f(4)$.

1. $f(x) = 2x + 7$

2. $f(x) = 5x - 4$

3. $f(x) = 0.2x + 0.7$

4. $f(x) = -5x + 3$

5. $f(x) = 4x - \frac{2}{3}$

6. $f(x) = -3x - 9$

Lesson 1-1

Identifying Mathematical Patterns

Identify a pattern and find the next three numbers in the pattern.

7. 9, 4, -1, -6, ...

8. 1, 2, 4, 8, ...

9. 18, 9, 10, 1, 2, ...

10. 7, 10, 13, 16, ...

Lesson 8-5

Simplifying Complex Fractions

Simplify each complex fraction.

11. $\frac{1 - \frac{1}{3}}{\frac{1}{2}}$

12. $\frac{\frac{1}{3} + \frac{1}{6}}{\frac{2}{3}}$

13. $\frac{1}{1 - \frac{1}{5}}$

14. $\frac{1 - \frac{3}{8}}{2 + \frac{1}{4}}$



Looking Ahead Vocabulary

15. Think of a function and evaluate the function for the input numbers 1, 2, 3, 4, and 5. List the five outputs in order. This list is a *sequence* of numbers. The sequence can be infinitely long.
16. Use a linear function to generate a sequence of five numbers. Beginning with the second number, subtract the number that precedes it. Continue doing this until you have found all four differences. Are the results the same? If so, you have discovered that your sequence has a *common difference*.
17. Now use an exponential function to define your sequence. Instead of subtracting, divide each number by the number that precedes it. Do this until you find all four quotients. Are these four results the same? If so, you have discovered that your sequence has a *common ratio*.