Looking Ahead

Checking an answer or evaluating a function for a specific value are common occurrences in algebra that involve real numbers.

Example Preview

Evaluate the function $f(x) = x^2 + 7x - 3$ for $x = -5$.

Solution

Substitute -5 for x in the function and simplify.

$$\begin{aligned} f(x) &= x^2 + 7x - 3 \\ f(-5) &= (-5)^2 + 7(-5) - 3 \\ &= 25 - 35 - 3 \\ &= -13 \end{aligned}$$

5.R.1 Exercises

Concept Check

True/False. Determine whether each statement is true or false. If a statement is false, explain how it can be changed so the statement will be true. (**Note:** There may be more than one acceptable change.)

1. The sum of a positive number and a negative number is always positive.

2. The sum of two positive numbers can equal zero.

3. The expression "15 – 7 " can be thought of as "fifteen plus negative seven."

4. If two numbers have the same sign, both the product and the quotient of the two numbers will be negative.

5. The mean of a set of numbers is always positive.

Practice

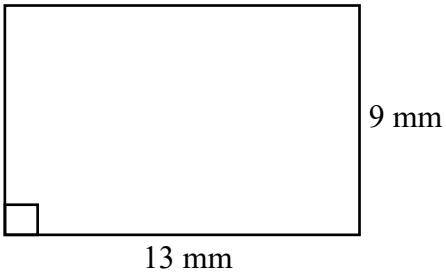
6. Compute the value of the following sum.

$-16.6 + 3.7$

7. Compute the value of the following sum.

$-60 + (-79) + 42$

8. Find the perimeter of the rectangle.



9. Find the product.

$3(-5)(-4)$

10. Find the product.

$0(-33)$

11. Find the quotient.

$\frac{45}{3}$

12. Find the quotient.

$\frac{46}{0}$

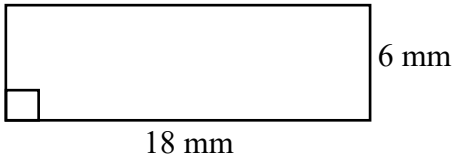
Applications

Solve.

13. A pilot flew a plane from an altitude of 10000 feet to an altitude of 3600 feet. What was the change in altitude?

14. In April, Mr. Burton opened a checking account and made deposits of $968, $1387, $986, and $369. He also wrote checks for $193, $480, $52, $468, and $545. What was his balance at the end of the month?

15. Find the area of the rectangle:



Writing & Thinking

16. If you multiply an odd number of negative numbers together, do you think that the product will be positive or negative? Explain your reasoning.