

Section 1.7 Algebraic Expressions and Properties of Real Number

Evaluate the expression for the given substitution.

1) $(a + b) - c$ when $a = -3$, $b = -2$, $c = -6$

2) $(a + b) + 3c$ when $a = 3$, $b = -12$, $c = 8$

3) $(a + 2b) + c$ when $a = 5$, $b = -10$, $c = 6$

Evaluate the expression for the given substitution.

4) $\frac{5a + 4b}{a + b}$ when $a = 3$, $b = -2$, $c = -1$

5) $\frac{a - 4b}{a + 2b}$ when $a = 3$, $b = -2$, $c = -1$

6) $\frac{5a - 3b}{6a + b}$ when $a = 3$, $b = -2$, $c = -1$

Rewrite each expression using the distributive property.

7) $12(4x - 3) - 5x$

8) $-14(7x - 1) + 17x$

9) $-4(8x + 4) - 7x$

10) $-2(-4x + 5) - 12x$

11) $-5(-7x - 12) - 14x$

Combine like terms and simplify.

12) $5x - 5 + 12x - 7 - 9x$

13) $-7x - 4 - 41x + 8 + 12x$

14) $-12x + 7 - 15x + 11 + 22x$

Translate the phrase into an algebraic expression. Let x represent the number.

15) 25 less than twice a number.

16) 37 less than three times a number.

17) 11 more than twice a number.

18) 5 more than three times a number.

19) 44 subtracted from twice a number.

20) 18 subtracted from three times a number.