

Substitution

1. Evaluate each of the following by substitution.

a. $\square - \diamond$ if $\square = 8$ and $\diamond = 3$

b. $\square \times \diamond$ if $\square = 7$ and $\diamond = 4$

c. $\diamond + \square - 6$ if $\square = 7$ and $\diamond = 14$

d. $(2 \times \diamond) - (3 \times \square)$, if $\square = 5$ and $\diamond = 9$

e. $(\square \div 4) \times (9 - \diamond)$, if $\square = 28$
and $\diamond = 5$

f. $\square \times (\diamond - 2)$, if $\square = 5$ and $\diamond = 8$

g. $48 \div (2 \times \square) + \diamond$, if $\square = 8$
and $\diamond = 15$

h. $(5 \times \diamond) \times \square$, if $\square = 7$ and $\diamond = 6$

i. $\frac{2 \times \square - 3 \times \diamond}{\square - (\diamond + 2)}$, if $\square = 8$ and $\diamond = 5$

j. $\frac{12 \times (\square - \diamond)}{\diamond + 9}$, if $\square = 11$ and $\diamond = 7$

k. $\frac{5 \times \square - 3 \times \diamond}{4 \times (\square - 1)}$, if $\square = 5$ and $\diamond = 3$

l. $\frac{12 \div \square + 2 \times \diamond}{(\diamond - 2) \div 4}$, if $\square = 3$ and $\diamond = 6$

2. Evaluate each by substituting the given numbers for the variables (letters).

a. $2x + (5 - x)$, if $x = 3$

b. $(a)(a) - 2a$, if $a = 4$

c. $m - (m - 4) - m$, if $m = 4$

d. $(y - 15) \div (y \div 4)$, if $y = 20$

e. $(2n - 15) \div (n \div 3)$, if $n = 15$

f. $4a - a \div 5$, if $a = 20$

g. $(2d + 9 - d) \div (d + 1)$, if $d = 3$

h. $2x - 3y + 15$, if $x = 7, y = 1$

i. $2k + 3(m)(m) - 5$, if $k = 10, m = 1$

j. $(2x + y) \div (2xy + 4)$, if $x = 0, y = 4$

k. $\frac{a + b}{a - b} + \frac{2a + 2b}{2b + 2}$, if $a = 5, b = 3$

l. $\frac{20m + 2mn}{4n + 1}$, if $m = 2, n = 3$

Answers

1. a) 5 b) 28 c) 15 d) 3 e) 28 f) 30 g) 18 h) 210
i) 1 j) 3 k) 1 l) 16

2. a) 8 b) 8 c) 0 d) 1 e) 3 f) 76 g) 3 h) 26
i) 18 j) 1 k) 6 l) 4