

6th - Introduction to Algebra II



Finding Value of an Expression: By assigning values to variables in an algebraic expression, you can find the value of the expression.

Subtraction of Algebraic Expression: Subtraction of algebraic expressions are explained in each steps:

Steps I: Arrange the terms of the given expressions in the same order.

Steps II: Write the given expressions in two rows in such a way that the like terms occur one below the other, keeping the expression to be subtracted in the second row.

Steps III: Change the sign of each term in the lower row from + to - and from - to +.

Steps IV: With new signs of the terms of lower row, add column wise.

Multiplication of Monomials: In multiplication of algebraic expression before taking up the product of algebraic expressions, let us look at two simple rules. The product of two factors with like signs is positive, and the product of two factors with unlike signs is negative.

Exercise

1. Calculate the following expression for $x=3$, $y = 9$, $z=2$:

a. $6z+4x$ b. $3x + 5y - 2z$ c. $12x - 34y$ d. $15y - 20x + 23z$

2. Evaluate the following expression for $x = 2$, $y = 5$ and $z = 4$:

a. $4x+(7-z)-6y$ b. $(3x - 5) + 4y$ c. $35y - 19x$ d. $(21x - 39y) + 12z$

3. Find the value of algebraic expression if $(p = 1)$, $(q = 2)$ and $(r = 3)$:

a. $p+q+r$ b. $2p - 3q$ c. $4(p+q+r)$ d. $p+q-r$ e. $3p-4q+5r$

4. Find the value of algebraic expression $(7x - 3y + 4)$, if $(x = 2)$ and $(y = 3)$

5. Find the product of:

a) $6xy$ and $-3x^2y^3$
b) $3yt$ and $13xy$
c) $12xy$ and $14xyz$
d) $15xt^2$ and $20tx$

6. Evaluate:

a) $12xy$ and $13ty$
b) $5t^2$ and $15xz$
c) $10xy$ and $12yg$
d) $134xyz$ and $20y^2$

7. Subtract:

a) $8ab^2$ from $15ab^2$
b) $9m^2n$ from $7m^2n$
c) $-4pq$ from $-23pq$

8. Subtract $4a + 5b - 3c$ from $6a - 3b + c$

9. Subtract:

a) $-8a - 12b + 17c$ from $a - b - c$
b) $1 + 4m + 9m^2$ from $4 - m - 5m^2$
c) $7p + 8q - 3r$ from $5p - 2q + 9r$

