

Evaluation of Algebraic Terms and Expression

Substitute all the values and simplify.

Example : If $x = 2$, $y = 3$ and $z = -5$, then find the value of $5x - 3y^2 + z$

$$5x - 3y^2 + z$$

$$= 5(2) - 3(3)^2 + (-5) \quad \text{(Substituting the values)}$$

$$= 10 - 3 \times 9 - 5 \quad \text{(Using **BIDMAS** for simplification)}$$

$$= 10 - 27 - 5$$

$$= 10 - 32$$

$$= -22.$$

Exercise :

1) Evaluate the following terms, if $a = 3$, $b = 2$, $c = 1$

a) $4a$

b) $2b^2$

c) $-5a^2$

d) $-8bc$

$$= \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

e) $3a + 5b$

f) $8a^2 + 3c$

g) $6a - 2b$

h) $4bc - 2ab$

$$= \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

Calculate the values when $n = 1, 2$, and 7

2) $2n - 1$ when $n = 1$, $\underline{\hspace{1cm}}$, when $n = 2$, $\underline{\hspace{1cm}}$, and when $n = 7$, $\underline{\hspace{1cm}}$

3) n^2 when $n = 1$, $\underline{\hspace{1cm}}$, when $n = 2$, $\underline{\hspace{1cm}}$, and when $n = 7$, $\underline{\hspace{1cm}}$

4) $n(n - 1)$ when $n = 1$, $\underline{\hspace{1cm}}$, when $n = 2$, $\underline{\hspace{1cm}}$, and when $n = 7$, $\underline{\hspace{1cm}}$

5) $n^2 + 1$ when $n = 1$, $\underline{\hspace{1cm}}$, when $n = 2$, $\underline{\hspace{1cm}}$, and when $n = 7$, $\underline{\hspace{1cm}}$

6) $3n + 2$ when $n = 1$, $\underline{\hspace{1cm}}$, when $n = 2$, $\underline{\hspace{1cm}}$, and when $n = 7$, $\underline{\hspace{1cm}}$

7) $2n^2 - 1$ when $n = 1$, $\underline{\hspace{1cm}}$, when $n = 2$, $\underline{\hspace{1cm}}$, and when $n = 7$, $\underline{\hspace{1cm}}$

8) Find the value of the terms when $x = 18$ and $y = 6$

a) $\frac{x}{3}$

b) $(x + y) / y$

c) $(2x - 3y) \div 2$

$$= \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

9) If $a = 6$, $b = 2$ then find the value of the followings.

d) $(a + b)^2$

b) $a - b$

c) $a \div b$

$$= \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

10) If $m = 3$, and $n = 5$, Find the value of $m^2 - n^2$

$$= \underline{\hspace{2cm}}$$