

## Algebraic Expressions

1. Given  $x = 0, y = -1, z = 3$ . Find

a.  $3xyz - 2y$

b.  $yz^2 - 3x$

c.  $3xyz^2 - 3y^2$

d.  $\frac{5xz - 2y^2}{2yz}$

e.  $\frac{7x + 8y + 2z}{3z - 2y - 4x}$

f.  $(xy + x)(z - x) - (2z - 3)$

2. Given  $x = 4, y = -2, z = 3$ , find value of  $L = 2z + 15(x + y) + \frac{(x-y)^2}{4z}$ .

3. The equation in finding perimeter of a rectangle is  $P = 2(a + b)$ . A and B represent height and width of the rectangle. Find the perimeter of the rectangle if given

a.  $a = 3\text{cm}, b = 4\text{cm}$

b.  $a = 1.2\text{cm}, b = 0.9\text{cm}$

c.  $a = 4\frac{1}{2}\text{cm}, b = 3\frac{1}{4}\text{cm}$

4. Calculate

I.  $(10m - 9n) + (-8m - n)$

II.  $(7a - 2b) - (-3a - 7b)$

III.  $(9y - 2z) - (3y - 4z)$

IV.  $5x + 4(5x + 3)$

V.  $4u - 3(2u - 5v)$

VI.  $3a - 2(5a - 3b) - 2a$

VII.  $4(x - 1) + 5(2x + 3)$

VIII.  $-3(2h - k) + 4(k - 3h)$

IX.  $-4(a - 3b) - 5(a - 3b)$

X.  $3(p - 2q) - 4(2p - 3q - 5)$

XI.  $2(4b - 3) + 3(b - 1)$

XII.  $3(2b - 4a) - 2(3b - 7a)$

XIII.  $\frac{t-1}{3} + \frac{t+1}{2}$

XIV.  $\frac{p-2}{3} - \frac{p+1}{4}$

XV.  $1 - \frac{a-b}{a}$

5. Solve the equations

- |                                  |   |
|----------------------------------|---|
| I. $t - 8 = 3$                   | XVIII. $\frac{x}{3} - \frac{2x}{7} = 4$   |
| II. $m - 31 = 31 - 3m$           | XIX. $\frac{1}{2}x - \frac{1}{4}x = x - 9$  |
| III. $x + 17 = 9$                | XX. $-\frac{3}{4}x - 6 = \frac{x}{4} + 2$   |
| IV. $5x - 7 = 4x$                | XXI. $\frac{m}{2} - \frac{m}{3} - \frac{m}{4} = 1$  |
| V. $7x - 16 = 6x + 2$            | XXII. $\frac{2m-3}{4} = \frac{3m-2}{5}$   |
| VI. $10x + 18 = 9x + 9$          | XXIII. $\frac{3x+1}{5} = \frac{2(x+1)}{3}$  |
| VII. $2x + 1 = 3x - 5$           | XXIV. $6 - \frac{3(n-1)}{4} = \frac{n}{2}$  |
| VIII. $2x = 10$                  | XXV. $\frac{1}{5}(2x - 1) + \frac{1}{4}(3x - 1) = 3$  |
| IX. $6x = 54$                    | XXVI. $\frac{x+1}{3} + \frac{x+3}{4} - \frac{x+4}{5} = 16$                                  |
| X. $8t = -56$                    | XXVII. $6x = 2x - (x - 4)$  |
| XI. $-x = 8$                     | XXVIII. $2(3x - 4) + 7(4 - x) = 4x$   |
| XII. $-9a = -45$                 | XXIX. $\frac{x}{6} - \frac{x}{9} = 1$   |
| XIII. $-4x = \frac{8}{5}$        | XXX. $x - \frac{14-x}{3} = 8$   |
| XIV. $-\frac{w}{6} = 6$          | XXXI. $\frac{x}{3} - 2\left(\frac{1}{5} + \frac{1}{3}x\right) = \frac{3}{5}x - \frac{2}{3}$ |
| XV. $\frac{x}{3} = -7$           | XXXII. $\frac{2x+3}{2} - \frac{x-2}{3} = \frac{x+1}{6}$                                     |
| XVI. $\frac{m}{4} + 6 = m$       |   |
| XVII. $1 + \frac{7z}{2} = z + 6$ |   |