

## P.4 Mathematics

### LESSON ONE WEEK EIGHT

#### LESSON I

**TOPIC: ALGEBRA**

**SUBTOPIC: Equations with and without letters**

**CONTENT :** Solving equations involving addition.

Examples: (a)  $\square + 3 = 9$   
 $\square + 3 - 3 = 9 - 3$   
 $\square = 6$

(b)  $P + 5 = 11$   
 $P + 5 - 5 = 11 - 5$   
 $P = 6$

#### **ACTIVITY:**

Solve the following equations

1.  $\square + 6 = 13$

2.  $\square + 8 = 12$

3.  $\square + 4 = 9$

4.  $\square + 8 = 17$

5.  $\square + 5 = 10$

6.  $\square + 7 = 19$

#### **LESSON 2**

**TOPIC :** ALGEBRA

**SUBTOPIC:** Solving equations involving subtraction

**CONTENT :** Finding the value of the unknown

Examples: (a)  $\square - 4 = 6$   
 $\square - 4 - 4 = 6 + 4$   
 $\square = 10$

(b)  $y - 7 = 21$   
 $y - 7 + 7 = 21 + 7$   
 $y = 28$

**ACTIVITY:**

Solve the following equations

1.  $\square - 8 = 3$

2.  $\square - 5 = 4$

3.  $\square - 3 = 1$

4.  $\square - 7 = 2$

5.  $\square - 14 = 7$

6.  $\square - 17 = 6$

**LESSON 3****TOPIC: ALGEBRA****SUBTOPIC: Collecting like terms****Example:**

Simplify the following

(a)  $7x + 8x + x$   
 $= \underline{16x}$

(b)  $5c + 4c + 3c$   
 $= \underline{12c}$

(c)  $p + 4 + p + 6$   
 $p + p + 4 + 6$   
 $\underline{2p + 10}$

**ACTIVITY:**

Collect the like terms and simplify where necessary

1.  $a + 2a + 3a$

2.  $6a - 4a + 2 + 3$

3.  $5x + 4x - 6x$

4.  $x + 6 + 4x + 4$

5.  $4b + 6b + 5b + b$

6.  $3n + 7 + n - 4$

7.  $8p + p - 9p$

## LESSON 4

**TOPIC :** ALGEBRA  
**SUBTOPIC:** Collecting more like terms

**Example:**

$$\begin{aligned} \text{(a) Collect like terms} \\ &= x + y + x + 3y + x \\ &= x + x + x + y + 3y \\ &= \underline{3x + 4y} \end{aligned}$$

$$\begin{aligned} \text{(b) Collect like terms} \\ &= 8b + 2p + 12b + 3p \\ &= (8b + 12b) + (2p + 3p) \\ &= \underline{20b + 5p} \end{aligned}$$

$$\begin{aligned} \text{(a) Collect like terms} \\ &= 9d + 4c - 3c \\ &= \underline{9d + c} \end{aligned}$$

**ACTIVITY:**

**Collect like terms and simplify where necessary**

1.  $8t + 4x - 6t + x$

2.  $6y - 4t + 3x + 13$

3.  $2x + 5q + 3 + 4$

4.  $6a - 4p + 2 + 3$

5.  $10n + 3m + 11m$

6.  $14c - 4c - 5c$

## LESSON 5

**TOPIC :** ALGEBRA  
**SUBTOPIC:** Substitution

**Example:**

(a) If  $P = 3$  and  $m = 6$ , find the value of

$$\begin{aligned} \text{(i) } P + 4 \\ &= 3 + 4 \\ &= 7 \end{aligned}$$

$$\begin{aligned} \text{(iii) } p + m \\ &= 3 + 6 \\ &= 9 \end{aligned}$$

$$\begin{aligned} \text{(ii) } 2p = 2 \times p \\ &= 2 \times 3 \\ &= 6 \end{aligned}$$

**Activity:**

Given that  $a = 2$ ,  $b = 3$  and  $c = 4$ . Find the value of the following;

1.  $a + 2b$

2.  $11a + b$

3.  $b + 3c$

4.  $4a + 3b + c$

5.  $a + b - c$

6.  $11a - b + c$