Provincial Department Of Education – Sabaragamuwa
WEEKLY SCHOOL

Subject : Mathematics

Grade 7

Week : 6th of 2nd Term

Unit 12 – Algebraic Expressions(2)

- **Complete the following activities using the textbook or other appropriate learning resources.**

Simplifying the terms of an algebraic expression

Algebraic terms such as $5a$ and $8a$ which have the same unknown are called "**like terms**". By adding or subtracting several such terms, we can simplify them to one term.

There are no like terms in the algebraic expression $4x + 3y + 5$. Such an expression cannot be simplified further. The terms $4x$, $3y$, 5 of this expression are called "**unlike terms**".

Let us simplify $4x + 3y + x + 2y$.
Let us write the like terms together.

$$4x + 3y + x + 2y$$
$$= 4x + 1x + 3y + 2y$$
$$= 5x + 5y$$

Let us simplify $10p + 4k + p - k$.

$$10p + 4k + p - k$$
$$= 10p + 1p + 4k - 1k$$
$$= 11p + 3k$$

$$3x + 6k + 5x + 3k + 7$$
$$= 3x + 5x + 6k + 3k + 7$$
$$= 8x + 9k + 7$$

$$5a + b + 8 + 3a - b - 5$$
$$= 5a + 3a + b - b + 8 - 5$$
$$= 8a + 0 + 3$$
$$= 8a + 3$$

Substituting values for the unknowns in an algebraic expression

Let us consider the expression $x + 3$. When $x = 2$

$$x + 3$$
$$= 2 + 3$$
$$= 5$$

Let us find the value of $3x - 5$ when $x = 4$.

$$3x - 5$$
$$= 3 \times 4 - 5$$
$$= 12 - 5$$
$$= 7$$

Find the value of each of the algebraic expressions given below when $x = 4$ and $y = 2$.

(i) $x - y$

$x - y = 4 - 2 = 2$

(ii) $3x - y - 5$

$3x - y - 5 = 3 \times 4 - 2 - 5$
$= 12 - 2 - 5$
$= 10 - 5$
$= 5$

- **Complete all the exercises in the Exercise 12.4 and 12.5**