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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 5*a* and 8*a* 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					

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

Let us simplify 10p + 4k + p - k. 10p + 4k + p - k = 10p + 1p + 4k - 1k = 11p + 3k 5a + b + 8 + 3a - b - 5 = 5a + 3a + b - b + 8 - 5= 8a + 0 + 3

Substituting values for the unknowns in an algebraic expression

Let us consider the expression $x + 3$. When $x = 2$	Let us find the value of $3x - 5$ when $x = 4$.			
x + 3	3x - 5			
= 2 + 3	$= 3 \times 4 - 5$			
= 5	= 12 - 5			
	= 7			
Find the value of each of the algebraic expressions given below when $x = 4$ and $y = 2$.				
(i) $x - y$ (ii) $3x - y$	-y - 5			
$x - y = 4 - 2 = 2 \qquad \qquad 3x - 3x = 3x = 3x = 3x = 3x = 3x = 3x =$	$-y - 5 = 3 \times 4 - 2 - 5$			
	= 12 - 2 - 5			
	= 10-5			
	= 5			

= 8a + 3

Complete all the exercises in the Exercise 12.4 and 12.5