

MATHEMATICS



GRADE: 8

DATE: 12/05/2020

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Topic: Algebraic Expression (Addition and Subtraction of algebraic expression)

EXPAND AND SIMPLIFY

Addition and Subtraction of algebraic terms

❖ “Note ” Remember we only add and subtract terms which have the same variables and powers. Terms with different variables and powers are unlike terms

Worked examples

Descending means from the biggest to smallest

Group the like terms before adding or subtracting them

1. Simplify these algebraic expressions:

a) $6x - 4y - 3x - 2y$
 $6x - 3x - 4y - 2y$
 $3x - 6y$

b) $3x^2 + 4x - x^2 - 6x$
 $3x^2 - x^2 + 4x - 6x$
 $2x^2 - 2x$

c) $3ab - 9 + 3a + 2ab - 8 - a$
 $3ab + 2ab + 3a - a - 9 - 8$
 $5ab + 2a - 17$

2. Simplify the following and write your answers in descending powers of a:

a) $3a^2 - a + a^2 + 5a^3 + 2a - 3a^3$
 $5a^3 - 3a^3 + 3a^2 + a^2 - a + 2a$
 $2a^3 + 4a^2 + a$

b) $6a^6 + 4a^8 + 10a^4 - 4a^6 - 2a^8 - 6a^4$
 $4a^8 - 2a^8 + 6a^6 - 4a^6 + 10a^4 - 6a^4$
 $2a^8 + 2a^6 + 4a^4$

Exercise 8.2 pg 91 “Learner’s book”

1. Simplify these algebraic expressions

1.1

1.2

1.3

1.4

1.5

2. Simplify the following and write your answers in descending powers of a:

2.1

2.2

2.3

2.4

2.5