

# Algebra

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$2x^2 + 3x + 4$  Expression

How many terms in the expression?

3 terms - parts

What word is used for the letter in an expression?

unknown or variable

What is the coefficient of  $x^2$ ?

2 - the number in front of the variable

What is the coefficient of  $x$ ?

3 the number in front of  $x$ .

What do we call a number on its own (no variable)

the constant

In the given expression the constant is 4.

Rules for signs:

Add/Subtract

$\ominus$  and  $\ominus = \ominus$  } add

$\oplus$  and  $\oplus = \oplus$  }

$\oplus$  and  $\ominus$  subtract  
keep the sign of the bigger number

Multiply

$\oplus \times \oplus = \oplus$

$\ominus \times \ominus = \oplus$

$\oplus \times \ominus = \ominus$

Divide

$\frac{\oplus}{\oplus} = \oplus$

$\frac{\ominus}{\oplus} = \ominus$

$\frac{\oplus}{\ominus} = \ominus$

$\frac{\ominus}{\ominus} = \oplus$

Rules for Algebra

① You can ONLY ADD OR SUBTRACT LIKE TERMS

Eg1)  $3x + 4x = 7x$

Eg2)  $3x + 4x - 2x =$   
 $7x - 2x = 5x$

Eg3)  $7a + 3 + 4a + 6$

$7a + 4a = 11a$

$3 + 6 = 9$

Ans =  $11a + 9$

Q1) Simplify

$5x + 1y - 2x + 4y$

$5x - 2x = 3x$

$1y + 4y = 5y$

Ans =  $3x + 5y$

Q2)  $3x + 2y + 3 + 4x + 3y + 1$

$3x + 4x = 7x$

$2y + 3y = 5y$

$3 + 1 = 4$

Ans =  $7x + 5y + 4$ .

Q3)  $3a - b + 4a + 5b - 2a + 5$

$3a + 4a - 2a = 5a$

$-1b + 5b = 4b$

+5

Ans =  $5a + 4b + 5$

HW

$y^2 - 8y - 3y^2 + 2y - 3$