

Simplification

Key Concepts and Conditions:

BODMAS Rule:

Order of operations: Brackets, Orders (Powers and Roots), Division, Multiplication, Addition, and Subtraction:

Preference Order	Operator	Symbol
1st	Brackets	$() , \{ , []$
2nd	Orders (Powers and Roots)	$^{\wedge} , \sqrt{}$
3rd	Division	$\div$
4th	Multiplication	$\times$
5th	Addition	$+$
6th	Subtraction	$-$

Understand the rules of sign operations:

$$(+) \times (+) = (+)$$

$$(-) \times (-) = (+)$$

$$(-) \times (+) = (-)$$

Important Formulas:

Fractions:

$$\text{Addition/Subtraction: } \frac{a}{b} + \frac{c}{d} = \frac{ad+cb}{bd}$$

$$\text{Multiplication: } \frac{a}{b} \times \frac{c}{d} = \frac{ac}{bd}$$

$$\text{Division: } \frac{a}{b} \div \frac{c}{d} = \frac{a \times d}{b \times c}$$

