Worksheet (9) |

Lower Secondary
Stage (6-8)

1st Semester | 2023-2024

Subject: Math　　　　　　　　　　　　　**Chapter:** (1, 6, 9, 11)
Name: _____　　　　　**Grade 6 CS**
 Objective:
 • **To revise the covered material of the first semester.**
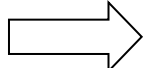
Negative numbers.

Remember.

In **adding** and **subtracting** negative numbers:
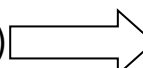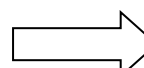
- **Same** signs $\Longrightarrow$ **add** the numbers and put the **common** sign.

  Example: -2 + -4 = -6

- **Different** signs $\Longrightarrow$ **subtract** the numbers and the **sign** of the **answer** is according

  to the **sign** of the **bigger** number.

  Example: -8 + 5 = -3

- When you have **two negative** signs (- -) $\Longrightarrow$ **turn** the sign to **positive** (+).

  Example: (4 − − 6 it will be 4 + 6 = 10)

In **multiplying** and **dividing** numbers:

- if you have **same** signs (+ +) or (- -) $\Longrightarrow$ The sign of the **answer** is **positive** (+)

  Example: - 2 × - 5 = 10

- If you have **different** signs (+ -) $\Longrightarrow$ The sign of the **answer** is **negative** (-)

  Example: -3 × 9 = -27

Exercise (1): Workout.

a) $-10 - 5 =$

b) $-26 - -20 =$

c) $40 - 50 =$

d) $-2 \times 5 =$

e) $-3 \times -5 =$

f) $4 \times -6 =$

g) $-54 \div -9 =$

h) $21 \div -3 =$

i) $-36 \div -4 =$

j) $2.36 - 4.03 =$

k) $10.2 - 8.005 =$

l) $-4.5 - 6.81 =$

m) $-13.22 - -5.014 =$

n) $12.5 \times 5 =$

o) $8.521 \times 7 =$

p) $258.1 \times 3 =$

q) $2.58 \div 3 =$

r) $0.081 \div 9 =$

s) $13.25 \div 5 =$

t) $6.514 + 5.1 =$

u) $14.05 - 8.55 =$

BIDMAS rule.

ORDER OF
OPERATIONS
B BRACKETS
I INDICES
D DIVISION
M MULTIPLICATION
A ADDITION
S SUBSTRACTION
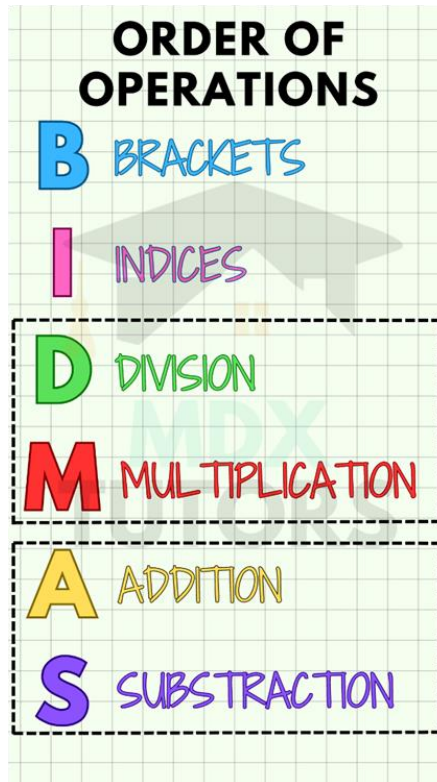
Exercise (2): Workout.

a) $2 + 15 \div 3 - 10 + 3^2$

b) $10 - 20 + (5^2 \div 5)$

c) $2 \times 3 \times 2 + (2 - 10) + \sqrt{64}$

d) $\sqrt{49} + 4^2 - 10 \times 5$

Exercise (3): Answer the following questions.

a) Find the highest common factor (HCF) of:

   36:

   48:

   HCF:

b) Find the lowest common multiple (LCM) of:

   6:

   9:

   12:

c) Check the divisibility.

Number	÷ 2	÷ 3	÷ 5	÷ 6	÷ 9
25110					
152					
749					

d) Workout.

   1) 6^2

   2) $\sqrt{36}$

   3) 16^2

   4) $\sqrt{361}$

   5) 11^2

   6) $\sqrt{196}$

Fractions.

Remember:

Adding fractions	**Multiplying fractions**	**Dividing fractions**
Same denominators	No need for same denominators	Keep change flip
	Try to **simplify** the fraction first	
	Then multiply.	

Exercise (4): Workout.

a) $6\frac{2}{7} + 3\frac{11}{21}$

b) $9\frac{11}{13} + 7\frac{5}{9}$

c) $\frac{48}{50} \times \frac{35}{54}$

d) $\frac{17}{63} \times \frac{49}{51}$

e) $\frac{3}{5} \div \frac{15}{20}$

f) $2\frac{1}{6} \div 3\frac{2}{5}$

g) $\frac{4}{5} + \frac{18}{45} \times \frac{14}{21} + \frac{13}{15}$

h) $\left(\frac{5}{8}\right)^2 \times \frac{16}{25} + \frac{7}{8}$

Fractions, decimals and percentages.

Exercise (5): Workout.

Fraction	Decimal	Percentage
$\dfrac{3}{8}$		
	5.01	
		1 %
$3\dfrac{7}{50}$		
		635 %

Exercise (6): Workout.

a) 60% of 35

b) 55% of 75

c) 11% of 6.4

d) 99% of 140

e) 2% of 2.20

f) 30% of 5.80

Ratio.

Exercise (7): Simplify the ratios.

a) 15 : 55

b) 220 : 120

c) 32 : 16 : 64

d) $\frac{2}{7} : \frac{10}{14}$

e) $\frac{4}{5} : \frac{1}{5}$

f) 15 : 35 : 5

Share in a given ratio.

Exercise (8):

Share.

a) $55 in the ratio 2 : 3

b) $360 in the ratio 5 : 4

c) 8.40 cm in the ratio 6 : 2

d) 45.2 km in the ratio 1 : 4

Exercise (9): Answer the following questions.

1) We carried out a traffic survey at school. Of the 48 vehicles $\frac{1}{3}$ were bikes, $\frac{1}{4}$ were vans, how many were cars?

2) A box holds $1\frac{1}{2}$ kg of nails. What weight of nails do seven such boxes hold?

3) Peter scored 14 out of 20 in Math test. He scored 17 out of 25 in an English test.

Which was the better mark

4) Share the following in the given order between **Anton** and **Sara**:

   a) 20 marbles in the ratio 3 : 2

   b) 36 biscuits in the ratio 4 : 5