Form 1

Chapter 1: Rational Number

1.1 INTEGER

> **Notes:**
> - Positive numbers are written with or without sign ' + '
> - Negative numbers must be written with a sign ' - '
> - An integer is a whole number that has positive, negative and even zero signs

A Choose a positive or negative number based on the situation below

a)	b)	c)
$+ 30\,^{0}C$	$+ 20\ m$	$+ 70\,^{0}C$
$- 30\,^{0}C$	$- 20\ m$	$- 70\,^{0}C$

A Tick / on the appropriate number for the following situation and X if not.

a	Salim climbed 10 stairs.	+10		-10	
b	Ah Chong went down 5 levels from level 15.	+5		-5	
c	Nazri move 7 steps to the left.	+7		-7	
d	The water temperature increases by $17\,^{0}C$	$+17\,^{0}C$		$- 17\,^{0}C$	

LIVEWORKSHEETS

C State whether the following numbers are integers or not.
(Write in words in the answer space)

Integer		Not an Integer

a	0	d	36.9
	_____		_____
b	-2000	e	$-\dfrac{2}{3}$
	_____		_____
c	98	f	$+\dfrac{5}{8}$
	_____		_____

D Select an integer from the following list

a)

5    $\dfrac{5}{7}$

2.6

-117   -1.9

b)

0.1   0.003

14   -0.02

2

c)

$\dfrac{2}{5}$ $-\dfrac{5}{3}$ $2\dfrac{1}{6}$

250   -11
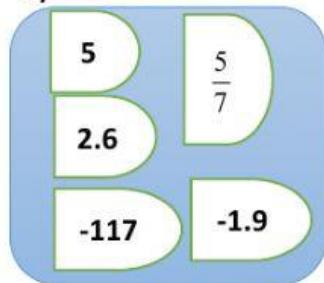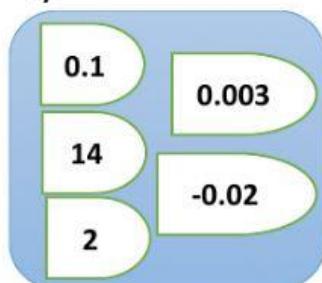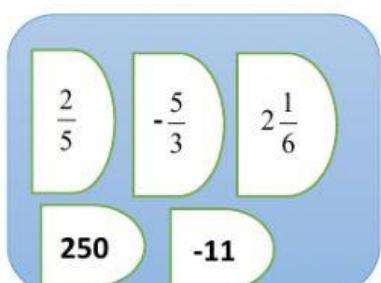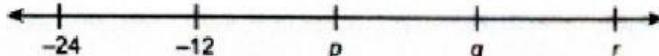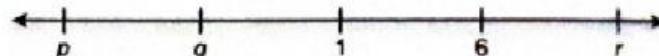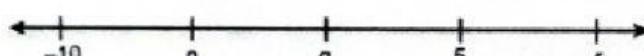
E Determine the position of the following integers on a given number line

a	0 , -3 , 3 -6 , -15
b	14 , -21 , -7 , -35 , -14
c	5 , -10 , 15 , 25 , 0

F State the values of p, q and r in the following number line.

a	
	p = q = r =
b	
	p = q = r =
c	
	p = q = r =

G Compare and arrange the following numbers in the order indicated.

(Write meetings using commas and without spaces)

a	-4 , $-8,5,9,-21$ (Ascending order) _____
b	$0,5,-7,21,-24$ (Descending order) _____
c	$99,-990,9009,-9909,-90000$ (Descending order) _____

## 1.2 BASIC ARITHMETIC OPERATIONS INVOLVING INTEGERS

Nota:

- **Direction of the arrow on the number line based on the operation**

Addition of positive integers   (+)   Positive integer subtraction   (−)

H Fill in the blanks below.

a)

$$\boxed{} + \left(\boxed{}\right) = \boxed{}$$

b)

$$\boxed{} - \left(\boxed{}\right) = \boxed{}$$

c)

$$\boxed{} - \left(\boxed{}\right) = \boxed{}$$

d)

$$\boxed{} + \left(\boxed{}\right) = \boxed{}$$

I Tick / on the correct answer and X if not.
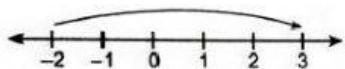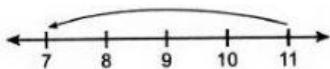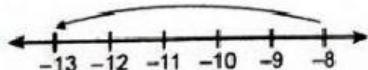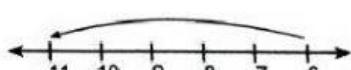
$(-11)\times(-5) = -55$	
$(-84)\div(-6) = -14$	
$(-117)\div 13 = -9$	
$128 \div(-8) = -16$	

J Solve.

a) An airplane is 34 m above sea level while a turtle is 18 m below sea level just below the airplane. After a few minutes, the plane flew upwards by 7 m and there was a shark swimming 5 m above the turtle. Find the distance, in m, between the plane and the shark

[_____ m]

b) There are 25 pieces of sweets in one package. If Simon buys 8 packets of sweets to be distributed equally to 40 children, how many pieces of sweets will each child receive?

[_____ sweets]

c) The initial temperature of a solution in one experiment is 8 C. Its temperature drops by 20 C after cooling. Then, the temperature increased by 5 C after heating. Determine the final temperature of the solution.

$$^{0}C$$

1.3 POSITIVE NUMBER FRACTIONS AND NEGATIVE NUMBER FRACTIONS

Notes:

$$\frac{a}{b}$$ ⟵ Numerator

⟵ Denominator

K Complete the following number line with the given fraction.

Drag the appropriate answer.

a	$1\frac{5}{11}$ $-\frac{4}{11}$ $\frac{4}{11}$ $1\frac{1}{11}$
b	$-\frac{1}{3}$ $-\frac{2}{3}$ $\frac{1}{6}$ $-\frac{1}{6}$
c	$\frac{3}{4}$ $-\frac{3}{8}$ $-\frac{3}{4}$ $-1\frac{1}{8}$
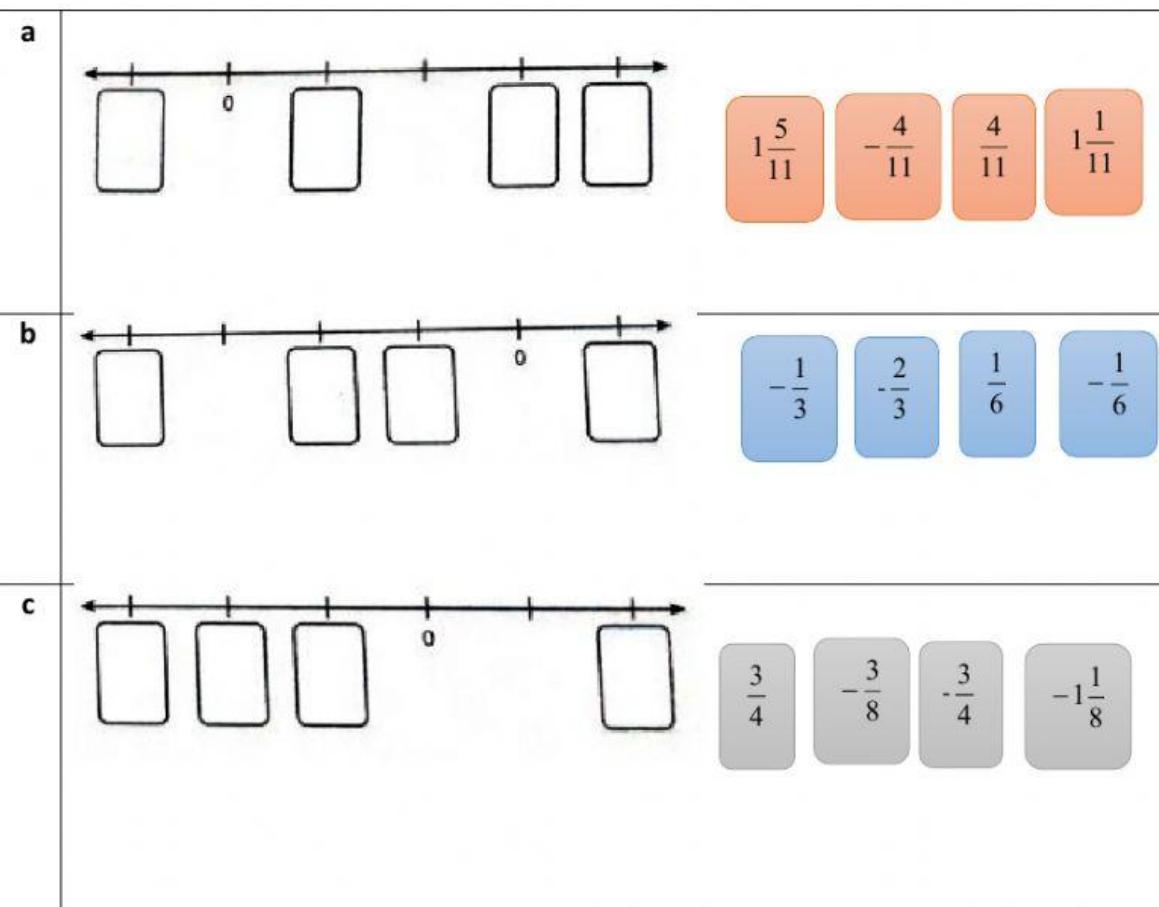
L Calculate the following value. (Match answers)

$$\left(-\frac{3}{7}+\frac{2}{3}\right)\times\frac{4}{5}$$

$$\frac{3}{5}+\left(-\frac{4}{5}\right)\times\left(-\frac{2}{3}\right)-1\frac{3}{5}$$

$$\frac{5}{7}\div\left(-\frac{14}{15}+\frac{9}{10}\right)$$

$$2\frac{3}{4}\times\left(\frac{2}{5}-\frac{7}{10}\right)$$

$$-21\frac{3}{7}$$

$$-\frac{33}{40}$$

$$-\frac{7}{15}$$

$$\frac{4}{21}$$

1.4 POSITIVE DECIMALS AND NEGATIVE DECIMALS

M Mark / on the correct values of P, Q and R and mark X if not.

a

P		Q		R	
1.05	1.15	1.35	1.4	2.25	2.45

b

P		Q		R	
-0.15	-0.14	0.7	0.8	0.98	1.05

c

P		Q		R	
2.3	-0.5	-0.25	3.0	0.75	3.2

N Calculate the following value.

a	**Give the answer in 1 t.p.** $7.3 - (-4.9) - 1.8 =$
b	**Give the answer in 2 t.p.** $12.8 + (-0.52) \div (14.6 + (-10.6)) =$
c	**Give the answer in 3 t.p.** $-0.6 \times (7.15 - 0.7 + 0.07) =$
d	There are two types of glass bottles in box A, large bottles and small bottles. Inside the box are 8 large bottles and 5 small bottles. The masses of one large bottle and one small bottle are 2.15 kg and 0.84 kg respectively. if the mass of the empty box is 0.15 kg. what is the total mass of box A? **Give the answer in 2 t.p.** g

1.5 RATIONAL NUMBERS

Notes:

- **A ratio number is a number that can be written in fractional form, $\dfrac{p}{q}$ where p and q are integers, $q \neq 0$**

O Mark / on the rational numbers and mark X if not.

a	$\dfrac{9}{0}$		**d**	$\dfrac{2}{1}$	
b	$\dfrac{3}{8}$		**e**	$\dfrac{5}{100}$	

c	$-\dfrac{2.4}{4.8}$		f	0.009	

P Solve

a	**Find the value of** $2\dfrac{2}{3} \times \left[\dfrac{7}{8} + \left(-\dfrac{5}{16} \right) \right] =$	
b	**Find the value of** $\dfrac{11}{12} \div \left[\dfrac{5}{12} - \left(-\dfrac{3}{8} \right) \right] =$	
c	Othman is a diver. He started diving 4 m below sea level. After diving another 2 m deep, he rises again 3m. Find the final position of Othman, in m. _____ m below sea level	
d	In a 4 x 100 m relay event, the first runner took 13.6 s to complete the run. The second runner was 0.3 s slower than the first runner but the third runner was 0.4 s faster than the first runner. If the last runner takes 10.9 s. What is their total running time? s (1 d.p)	
e	Ali spends from her monthly salary on a home loan. He spent RM 34 560 on a home loan in one year. If he receives the same amount of monthly salary for the year, calculate his monthly salary. RM	