



**O.S.D.A.V. Public School, Kaithal**  
**May Test (2025-26)**  
**Subject: Mathematics (Set A)**  
**Class: VII**

**Time: -1:20 hrs**

**M.M.:- 30**

Q.No.	Questions	Marks
<b>Section-A</b>		
1.	How many rational numbers are lie between two rational numbers? a) Infinite                      b) Two                      c) Seven                      d) Zero	1
2.	Absolute value of $\frac{-5}{9}$ is: a) $\frac{-5}{9}$ b) $\frac{5}{9}$ c) $\frac{9}{5}$ d) $\frac{-9}{5}$	1
3.	Identity element of addition is : a) 1                      b) 2                      c) 0                      d) does not exist	1
4.	Additive inverse of $\frac{3}{8}$ is- a) $\frac{-3}{8}$ b) $\frac{8}{3}$ c) $\frac{3}{8}$ d) $\frac{-3}{-8}$	1
5.	<b>Assertion(A):</b> $a \times b = b \times a$ is called the commutative law for multiplication <b>Reason(R):</b> Rational Numbers are commutative under addition and multiplication. a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true and R is not the correct explanation of A. c) A is true but R is false. d) A is false but R is true.	1
<b>Section-B</b>		
6.	Find the value of x if- $\frac{x}{26} = \frac{9}{-13}$	2
7.	Represent $\frac{-3}{5}$ on number line.	2
8.	Compare the following rational numbers: $\frac{-4}{9}$ , $\frac{-3}{11}$	2
9.	What number should be added to $\frac{2}{3}$ so as to get 2?	2
<b>Section-C</b>		
10.	Find the value of $x - y$ and $y - x$ for $x = \frac{2}{7}$ , $y = \frac{9}{14}$ . Are they equal?	3
11.	Simplify: $\frac{9}{10} + \frac{-5}{12} + \frac{-1}{6} + \frac{7}{15}$	3
12.	i) Check if the reciprocal of $\frac{-3}{13}$ is $\frac{-13}{3}$ ? ii) Find the standard form of $\frac{20}{-35}$ .	1.5+1.5
<b>Section-D</b>		
13.	Arrange the following rational numbers in ascending order. $\frac{-9}{10}$ , $\frac{7}{-15}$ , $\frac{13}{30}$ , $\frac{-4}{-5}$	4
14.	For $x = \frac{1}{2}$ , $y = \frac{3}{5}$ , $z = \frac{-7}{10}$ verify that : $x + (y + z) = (x + y) + z$	4



**O.S.D.A.V. Public School, Kaithal**  
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**Time: - hrs.**

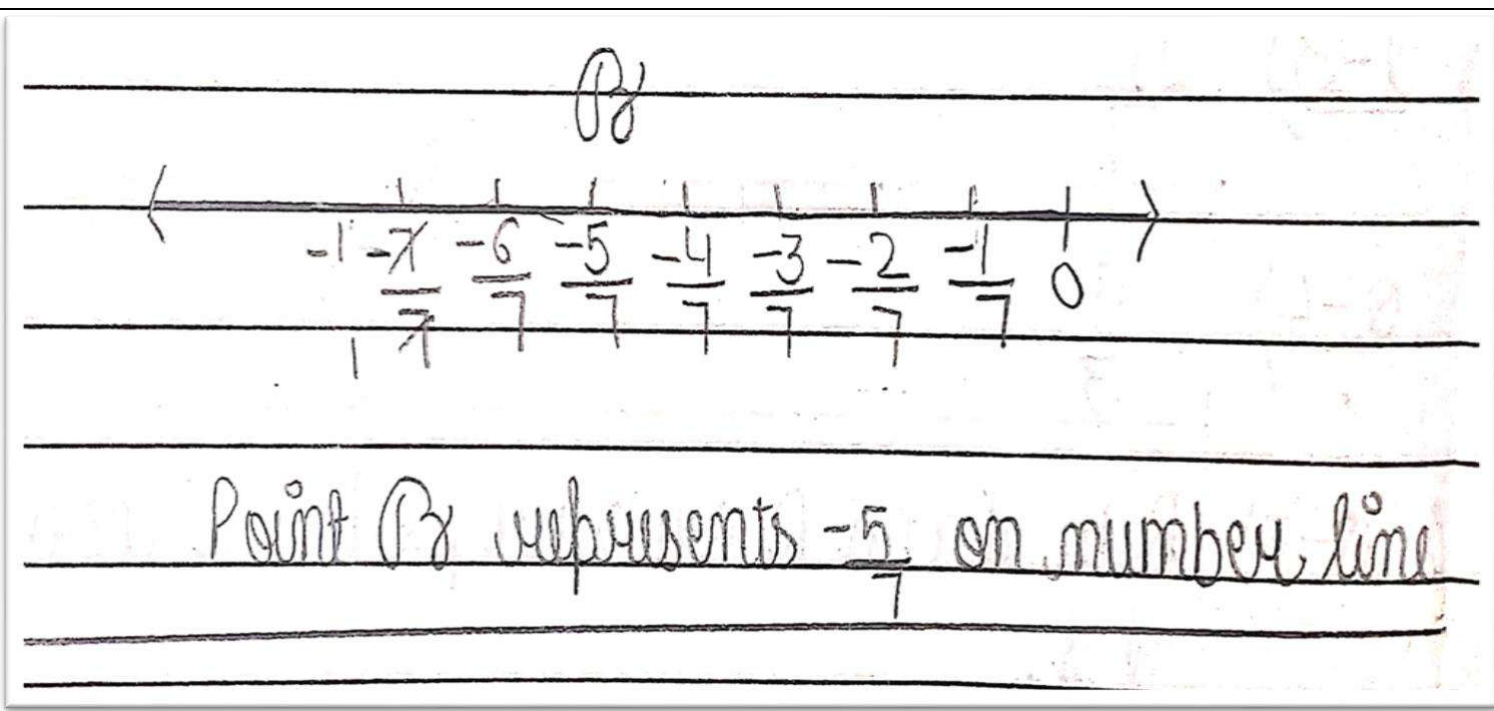
**M.M.:- 30**

Q.No.	Questions	Marks
<b>Section-A</b>		
1.	Additive inverse of $\frac{3}{4}$ is- a) $-\frac{3}{4}$ b) $\frac{4}{3}$ c) $\frac{3}{4}$ d) $-\frac{3}{-4}$	1
2.	Identity element of multiplication is : a) 1                      b) 2                      c) 0                      d) does not exist	1
3.	Absolute value of $-\frac{5}{7}$ is: a) $-\frac{5}{7}$ b) $\frac{5}{7}$ c) $\frac{7}{5}$ d) $-\frac{7}{5}$	1
4.	Which of the following is a negative rational number? a) $-\frac{5}{-4}$ b) $-\frac{5}{3}$ c) $\frac{6}{7}$ d) 0	1
5.	Assertion(A): $a \times b = b \times a$ is called the commutative law for multiplication Reason(R): Rational Numbers are commutative under addition and multiplication. a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true and R is not the correct explanation of A. c) A is true but R is false. d) A is false but R is true.	1
<b>Section-B</b>		
6.	What number should be added to $\frac{3}{4}$ so as to get 2?	2
7.	Compare the following rational numbers: $-\frac{4}{7}$ , $-\frac{9}{13}$	2
8.	Represent $-\frac{5}{7}$ on number line.	2
9.	Find the value of x if- $\frac{x}{24} = \frac{9}{-12}$	2
<b>Section-C</b>		
10.	i) Check if the reciprocal of $-\frac{3}{8}$ is $-\frac{8}{3}$ ? ii) Find the standard form of $\frac{21}{-35}$ .	3
11.	Find the value of $x - y$ and $y - x$ for $x = \frac{5}{7}$ , $y = \frac{11}{14}$ . Are they equal?	3

12.	Simplify: $\frac{7}{10} + \frac{-11}{12} + \frac{-5}{6} + \frac{8}{15}$	3
	Section-D	
13.	For $x=\frac{1}{5}, y=\frac{3}{7}, z=\frac{-9}{10}$ verify that : $x+(y+z) = (x+y)+z$	4
14.	Arrange the following rational numbers in ascending order. $\frac{-7}{10}, \frac{11}{-15}, \frac{17}{30}, \frac{-3}{-5}$	4



• 8)



1for  
numberli  
ne  
1for  
marking

9)

$$\frac{x}{24} = \frac{9x-1}{-12x-1} = \frac{-9}{12}$$

$$\frac{x}{24} = -\frac{9}{12}$$

~~$\frac{x}{24} - \frac{9}{12}$~~

$$12x^2 = 24x - 9$$

$$x = \frac{24x^2 - 9}{121}$$

$$x = -18$$

Ans:-  $x = -18$

1

1

### Section -C

**10)**

**i)  $\frac{-3}{8} \times \frac{-8}{3} = 1$ , yes they are reciprocal of each other.**

$$\text{ii) } \frac{21 \div 7}{-35 \div 7} = \frac{3}{-5}$$

$$\frac{3x-1}{-5x-1} = \frac{-3}{5}$$

1 1/2

**1 1/2**

11)

$$x = \frac{5}{7}, y = \frac{11}{14}$$

$$\begin{aligned} & \text{L.O.H.O.S} \\ & x - y \\ & = \frac{5}{7} - \frac{11}{14} \end{aligned}$$

$$= \frac{10 - 11}{14}$$

$$= \frac{-1}{14}$$

$$\begin{aligned} & \text{R.O.H.O.S} \\ & y - x \\ & = \frac{11}{14} - \frac{5}{7} \end{aligned}$$

$$= \frac{11 - 10}{14}$$

$$= \frac{1}{14}$$

$$\text{L.O.H.O.S} \neq \text{R.O.H.O.S}$$

Hence, they aren't equal to each other.

$$1\frac{1}{2} + 1 + \frac{1}{2}$$

12.

$$2) \frac{7^6}{10} + \frac{-11^5}{12} + \frac{-5^{10}}{6} + \frac{8^{11}}{15}$$

$$= \frac{42 - 55 - 50 + 32}{60}$$

$$= \frac{-55 - 50 + 32 + 42}{60}$$

$$= \frac{-105 + 32 + 42}{60}$$

$$= \frac{-105 + 74}{60}$$

$$= \frac{-31}{60} \text{ ans}$$

$$\begin{array}{r|l} 2 & 10-12-6-15 \\ 2 & 5-6-3-15 \\ 3 & 5-3-3-15 \\ 5 & 5-1-1-5 \\ & 1-1-1-1 \end{array}$$

$$\text{LCM} \rightarrow 2 \times 2 \times 3 \times 5 \rightarrow 60$$

$$\frac{1}{2} \text{ LCM}$$

$$1\frac{1}{2}$$

$$1$$

Section - D

$$x = \frac{1}{5}, y = \frac{3}{7}, z = -\frac{9}{10}$$

2+1 ½ + ½

LoHos

$$x + (y + z)$$

$$= \frac{1}{5} + \left( \frac{3}{7} + \frac{-9}{10} \right)$$

$$= \frac{1}{5} + \left( \frac{30 - 63}{70} \right)$$

$$\frac{1 \times 14}{5} + \frac{-33}{70}$$

$$= \frac{14 - 33}{70}$$

$$= \frac{-19}{70}$$

RoHos

$$(x + y) + z$$

$$= \left( \frac{1}{5} + \frac{3}{7} \right) + \frac{-9}{10}$$

$$= \left( \frac{7 + 15}{35} \right) + \frac{-9}{10}$$

$$= \frac{22 \times 2}{35} + \frac{-9 \times 7}{10}$$

$$= \frac{44 - 63}{70}$$

$$= \frac{-19}{70}$$

LoHos = RoHos  
Hence Verified

13)

$$-\frac{7}{10}, \frac{11}{-15}, \frac{17}{30}, -\frac{3}{-5}$$

$$-\frac{7}{10}, \frac{11 \times (-1)}{-15 \times (-1)} = \frac{-11}{15}, \frac{17}{30}, \frac{-3 \times (-1)}{-5 \times (-1)} = \frac{3}{5}$$

$$= \frac{-7 \times 3}{10}, \frac{-11 \times 2}{15}, \frac{17 \times 1}{30}, \frac{3 \times 6}{5}$$

$$= \frac{-21}{30}, \frac{-22}{30}, \frac{17}{30}, \frac{18}{30}$$

$$= \frac{-22}{30}, \frac{-21}{30}, \frac{17}{30}, \frac{18}{30}$$

Ascending order  $\rightarrow$

$$\frac{11}{-15}, -\frac{7}{10}, \frac{17}{30}, -\frac{3}{-5} \text{ Answer.}$$

$\frac{1}{2}$  LCM  
 $\frac{1}{2}$   
Standard  
form

2

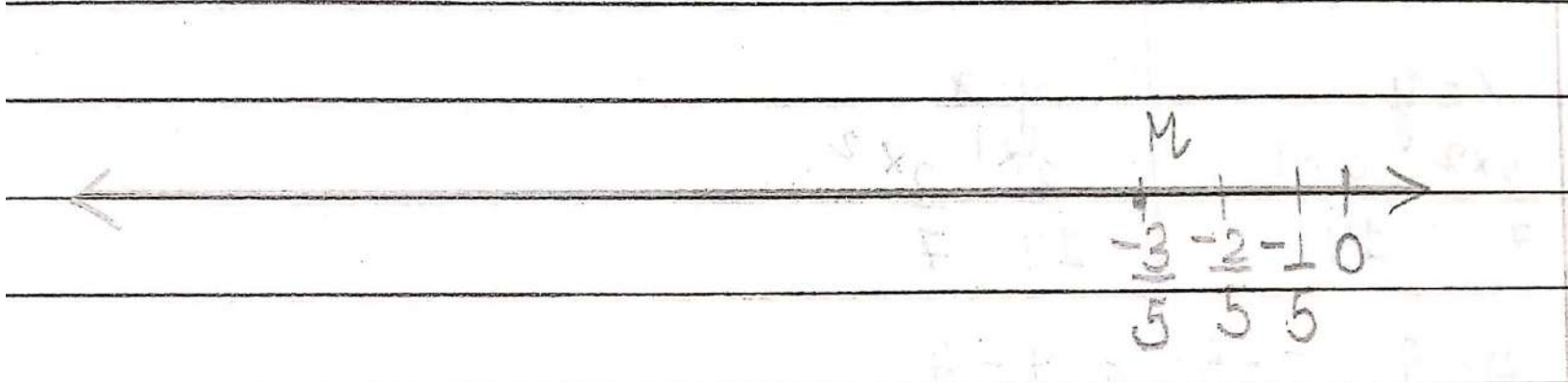
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Time: 1 hr 30 min.

M.M: 30

Q.No.	Questions	Marks
	Section A	
1	(a) Infinite	1
2	(b) $\frac{5}{9}$	1
3	(c) 0	1
4	(a) $-\frac{3}{8}$	1
5)	(a) both Assertion and reason are correct and reason is the correct explanation for assertion.	1
	Section B	
6)	<div><math display="block">\frac{x}{26} = \frac{9x-1}{-13x-1} = \frac{-9}{13}</math><math display="block">\frac{x}{26} = \frac{-9}{13}</math><math display="block">x \times 13 = 26 \times -9</math><math display="block">x \times 13 = -234</math><math display="block">x = \frac{-234}{13}</math><math display="block">x = -18</math><math display="block">\text{Ans} \Rightarrow \frac{-18}{26} = \frac{9}{-13}</math></div>	1 ½

		$\frac{1}{2}$
7)	 <p>Point 'M' represents <math>-\frac{3}{5}</math> on number line.</p>	1 for numberli 1for marking

$$-\frac{4}{9}, -\frac{3}{11}$$

By cross multiplication :-

$$-4 \times 11$$

$$-44$$

$$9 \times -3$$

$$-27$$

$$-44 < -27$$

$$-\frac{4}{9} < -\frac{3}{11}$$

Ans.

9)

One number  $\rightarrow \frac{2}{3}$   
Sum of 2 numbers  $\rightarrow \frac{2}{1}$

Let, the other no. =  $x$

$$x + \frac{2}{3} = \frac{2}{1}$$

$$x = \frac{2 \times 3}{1} - \frac{2 \times 1}{3}$$

$$x = \frac{6 - 2}{3}$$

$$x = \frac{4}{3} \quad \text{other no. is} = \frac{4}{3}$$

1

1

Section -C

10)

$x-y$  and  $y-x$  if  $x = \frac{2}{7}$ ,  $y = \frac{9}{14}$

LHS

RHS

 $x-y$  $y-x$ 

$$\frac{2 \times 2}{7} - \frac{9 \times 1}{14} \quad \begin{array}{r|l} 2 & 7-14 \\ \hline 2 & 7-7 \\ & 1-1 \end{array}$$

$$= \frac{9 \times 1}{14} - \frac{2 \times 2}{7} \quad \begin{array}{r|l} 2 & 7-14 \\ \hline 2 & 7-7 \\ & 1-1 \end{array}$$

$$\frac{4-9}{14}$$

$$\text{LCM} = 2 \times 7 = 14$$

$$= \frac{9-4}{14}$$

$$\text{LCM} = 2 \times 7 = 14$$

$$\frac{-5}{14}$$

$$= \frac{5}{14}$$

LHS  $\neq$  RHS

hence verified

No, they are not equal.

$1\frac{1}{2}$   
 $+1+\frac{1}{2}$

11)

1. Simplify  $\Rightarrow$

$$\frac{9}{10} \oplus \frac{5}{12} \oplus \frac{1}{6} + \frac{7}{15}$$

$$= \frac{9 \times 6}{10} - \frac{5 \times 5}{12} - \frac{1 \times 10}{6} + \frac{7 \times 4}{15}$$

$$= \frac{54}{60} - \frac{25}{60} - \frac{10}{60} + \frac{28}{60} = \frac{47}{60}$$

$$= \frac{47}{60} \text{ Ans.}$$

$$\begin{array}{r|l} 2 & 10-12-6-15 \\ \hline 5 & 5-6-3-15 \\ 3 & 1-6-3-3 \\ 2 & 1-2-1-1 \\ & 1-1-1-1 \end{array}$$

$\frac{1}{2}$  LCM

$2\frac{1}{2}$

12)

2. (i) Check if the reciprocal of  $-\frac{3}{13}$  is  $-\frac{13}{3}$ ?

$$\frac{-3}{13} \times \frac{-13}{3} = 1$$

Yes,  $-\frac{3}{13}$  and  $-\frac{13}{3}$  are the reciprocal of each other because ~~their~~ we get 1.

(ii) Find the standard form.

$\Rightarrow \frac{20}{-35}$       Step-I       $20 \div 5 = 4$   
 $-35 \div 5 = -7$

Step-II       $4 \times -1 = -4$   
 $-7 \times -1 = 7$

Ans = The standard form of  $\frac{20}{-35}$  is  $-\frac{4}{7}$ .

1 ½

1 ½

Section -D

$$= \frac{-9}{10}, \frac{7}{-15} \times (-1) = \frac{-7}{15}, \frac{13}{30}, \frac{-4}{-5} \times (-1) = \frac{4}{5}$$

$$= \frac{-9 \times 3}{10 \times 3}, \frac{7 \times 2}{15 \times 2}, \frac{13 \times 1}{30 \times 1}, \frac{4 \times 6}{5 \times 6}$$

$$2 \mid 10-15-30-5$$

$$3 \mid 5-15-15-5$$

$$5 \mid 5-5-5-5$$

$$= \frac{-27}{30}, \frac{-14}{30}, \frac{13}{30}, \frac{24}{30}$$

$$LCM = 2 \times 3 \times 5 = 30$$

Ascending order  $\rightarrow \frac{-9}{10}, \frac{7}{-15}, \frac{13}{30}, \frac{-4}{-5}$  Ans =

14)

$  \begin{aligned}  &14. \quad x + (y + 2) \\  &= \frac{1}{2} + \left( \frac{3}{5} + \frac{7}{10} \right) \\  &= \frac{1}{2} + \left( \frac{3 \times 2}{5 \times 2} + \frac{7 \times 1}{10 \times 1} \right) \\  &= \frac{1}{2} + \left( \frac{6}{10} + \frac{7}{10} \right) \\  &= \frac{1 \times 5}{2 \times 5} + \frac{13}{10} \\  &= \frac{5}{10} + \frac{13}{10} = \frac{18}{10} \\  &= \frac{9}{5}  \end{aligned}  $	$  \begin{aligned}  &(x + y) + 2 \\  &= \left( \frac{1}{2} + \frac{3}{5} \right) + \frac{7}{10} \\  &= \left( \frac{1 \times 5}{2 \times 5} + \frac{3 \times 2}{5 \times 2} \right) + \frac{7}{10} \\  &= \left( \frac{5}{10} + \frac{6}{10} \right) + \frac{7}{10} \\  &= \frac{11}{10} + \frac{7}{10} \\  &= \frac{11 + 7}{10} = \frac{18}{10} \\  &= \frac{9}{5}  \end{aligned}  $
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Hence verified.

$2 + 1\frac{1}{2} + \frac{1}{2}$