



GRADE: VIII Date:25/07/2024	CPE - 1 (2024-25) MATHEMATICS	Marks: 20 Time: 1 hours
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Q.No.	Questions	Mark
SECTION A		
I	Choose the correct option.	
1.	In a rational number $\frac{p}{q}$, where p and q are integers, which of the following is incorrect? a) $p = 0$ b) $p \neq 0$ c) $q = 0$ d) $q \neq p$	1
2.	The multiplicative inverse of $\frac{-9}{11}$ is : a) $\frac{9}{11}$ b) $\frac{-11}{9}$ c) $\frac{11}{9}$ d) $\frac{-9}{11}$	1
3.	Which of these is a linear equation ? a) $x^2 - 9 = 0$ b) $xy + 5 = 11$ c) $x - 13$ d) $X + 7 = 10$	1
4.	The absolute value of $\left \frac{-7}{9} \right $ is : a) $\frac{-7}{9}$ b) 7	1

	<p>c) $\frac{7}{9}$</p> <p>d) -9</p>							
II	Fill in the correct option.							
5.	$\frac{-3}{4} = \frac{\dots}{-8} = \frac{-9}{\dots}$ $\frac{-6}{-8} = \frac{-9}{12}$	1						
6.	$\frac{23}{45} \times 0 = 0 \times \frac{23}{45} = 0$.	1						
III	State whether the following statements are true or false.							
7.	The standard form of $\frac{-42}{36}$ is $\frac{7}{6}$. False	1						
8.	Zero is the identity element for addition of rational numbers. True	1						
	Match the following							
9.	<p>If a, b and c are any rational numbers , then :</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center; width: 50%;">A</td> <td style="width: 10%;"></td> <td style="text-align: center; width: 50%;">B</td> </tr> <tr> <td style="vertical-align: top;"> <p>1. $a \times b = b \times a$</p> <p>2. $(a + b) + c = a + (b + c)$</p> <p>3. $a - b = c$, a rational number</p> <p>4. $a \times (b - c) = a \times b - a \times c$</p> </td> <td style="vertical-align: middle; text-align: center;"> </td> <td style="vertical-align: top;"> <p>a) Closure property</p> <p>b) Distributive property</p> <p>c) Commutative property</p> <p>d) Associative property</p> </td> </tr> </table>	A		B	<p>1. $a \times b = b \times a$</p> <p>2. $(a + b) + c = a + (b + c)$</p> <p>3. $a - b = c$, a rational number</p> <p>4. $a \times (b - c) = a \times b - a \times c$</p>		<p>a) Closure property</p> <p>b) Distributive property</p> <p>c) Commutative property</p> <p>d) Associative property</p>	2
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	SECTION B							
	Answer the following questions							
10.	<p>Check the following are equivalent rational numbers.</p> <p>a) $\frac{-11}{33}$, $\frac{-1}{3}$ b) $\frac{-20}{26}$, $\frac{10}{13}$</p> <p>$-11 \times 3 = -33$ $-20 \times 13 = -260$</p> <p>$-1 \times 33 = -33$ $26 \times 10 = 260$</p> <p>$\frac{-11}{33} = \frac{-1}{3}$ $\frac{-20}{26} \neq \frac{10}{13}$</p>	2						
11.	<p>Verify the property of $a \times (b + c) = a \times b + a \times c$ by taking $a = \frac{1}{2}$, $b = \frac{-3}{4}$ and $c = \frac{-2}{3}$.</p> <p>LHS: $\frac{1}{2} \times \left(\frac{-3}{4} + \frac{-2}{3} \right) = \frac{-17}{24}$</p> <p>RHS: $\frac{1}{2} \times \frac{-3}{4} + \frac{1}{2} \times \frac{-2}{3} = \frac{-17}{24}$</p>	2						

12.	Find two rational numbers between $\frac{2}{5}$ and $\frac{3}{7}$. $\frac{19}{70}$, $\frac{9}{20}$, ...	2
13.	Solve the linear equation. $10x + 9 = 3 + 7x$ $10X - 7X = 3 - 9$ $3X = -6$ $X = -6/3 = -2$	2
14.	Represent the rational numbers $\frac{5}{6}$ and $\frac{-5}{6}$ on the number line.	2