



# TEST PAPER: MATHEMATICS

Time: 50 Minutes

Class: 8<sup>th</sup> I.C.S.E.

Max. Marks: 30 Marks

Date: 4<sup>th</sup> July, 2018

**Marking Scheme:** Four questions carry 10 marks each. Questions have 3 subparts each. Subparts (a) and (b) carry 3 marks each and subpart (c) carries 4 marks.

## Question 1:

a. Represent the following numbers on a number line:

i.  $1\frac{4}{5}$

ii.  $-\frac{4}{9}$

b. Find 3 rational numbers between  $\frac{1}{2}$  and  $\frac{3}{2}$  using average method

c. Find 8 rational numbers between 5 and  $5\frac{1}{2}$  using L.C.M. method

## Question 2:

a. Name the property of multiplication illustrated by the following statements:

(i)  $\frac{-11}{13} \times \frac{-17}{5} = \frac{-17}{5} \times \frac{-11}{13}$

(ii)  $\frac{-11}{13} \times \left(\frac{-17}{5} + \frac{7}{8}\right) = \frac{-11}{13} \times \frac{-17}{5} + \frac{-11}{13} \times \frac{7}{8}$

(iii)  $\left\{\frac{-11}{13} \times \frac{-17}{5}\right\} \times \frac{7}{8} = \frac{-11}{13} \times \left\{\frac{-17}{5} \times \frac{7}{8}\right\}$

b. Divide the sum of  $-3/5$  and  $2/7$  by the product of  $-20/7$  and  $-21/10$ .

c. Simplify the rational expressions:

(i)  $\left(\frac{3}{2} \times \frac{1}{6}\right) + \left(\frac{5}{3} \times \frac{7}{2}\right) - \left(\frac{9}{5} \times \frac{4}{3}\right)$

(ii)  $\left(\frac{3}{2} + \frac{1}{6}\right) \times \left(\frac{5}{3} - \frac{7}{2}\right) \times \left(\frac{9}{5} + \frac{4}{3}\right)$

## Question 3:

a. Name the following:

(i) The rational number that does not have a reciprocal.

(ii) The rational numbers that are equal to their reciprocals.

(iii) The rational number that is equal to its negative.

b. Which of the following statements are true or false?

(i) Every whole number is a rational number.

(ii) Every integer is a rational number.

(iii) 0 is a whole number but it is not a rational number.

c. i. Multiply  $\frac{7}{9}$  by the reciprocal of  $-\frac{3}{22}$

ii. By what number should we multiply  $-\frac{15}{28}$ , so that the product may be  $-\frac{5}{7}$ ?