CLASS 8 MATH TEST PAPER 2

Class 08 - Mathematics

Time Allowed: 1 hour **Maximum Marks: 30**

Section A

1. Which of the following expressions shows that rational numbers are associative under multiplication. **[1]**

   a) $\frac{2}{3} \times \left(\frac{-6}{7} \times \frac{3}{5}\right) = \left(\frac{3}{5} \times \frac{2}{3}\right) \times \frac{-6}{7}$ b) $\frac{2}{3} \times \left(\frac{-6}{7} \times \frac{3}{5}\right) = \frac{2}{3} \times \left(\frac{3}{5} \times \frac{-6}{7}\right)$

   c) $\left(\frac{2}{3} \times \frac{-6}{7}\right) \times \frac{3}{5} = \left(\frac{-6}{7} \times \frac{2}{3}\right) \times \frac{3}{5}$ d) $\frac{2}{3} \times \left(\frac{-6}{7} \times \frac{3}{5}\right) = \left(\frac{2}{3} \times \frac{-6}{7}\right) \times \frac{3}{5}$

2. A number which cannot be written in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$ is called a _____. **[1]**

   a) negative number b) positive number

   c) rational number d) irrational number

3. Find $\frac{3}{4} + \left(-\frac{5}{2}\right) + \left(-\frac{8}{3}\right) + \frac{5}{5}$ **[1]**

   a) -41 b) -1

   c) $-\frac{41}{12}$ d) 12

4. Solve the following: 0.25(4x - 5) = 0.75x + 8 **[1]**

   a) -29 b) 37

   c) -37 d) 39

5. The sum of successive odd number 1,3,5,7,9,11,13 and 15 is **[1]**

   a) 81 b) 64

   c) 49 d) 36

6. The value of $\sqrt{10 + \sqrt{25 + \sqrt{108 + \sqrt{154 + \sqrt{225}}}}}$ is **[1]**

   a) 8 b) 6

   c) 4 d) 10

7. Which of the following is a Pythagorean triplet? **[1]**

   a) (5, 16, 19) b) (5, 12, 18)

   c) (6, 8, 10) d) (3, 4, 7)

8. Simplify: $\frac{25 \times t^{-4}}{5^{-3} \times 10 \times t^{-8}}$ **[1]**

   a) t^2 b) $\frac{625t^4}{2}$

   c) $625t^2$ d) 625t

9. The value of $\frac{5^0+2^1}{3^2+8^0}$ is **[1]**

   a) $\frac{5}{3}$ b) $\frac{3}{5}$

c) $\frac{3}{10}$ d) $\frac{2}{5}$

10. The value of $\frac{5}{(121)^{\frac{-1}{2}}}$ is **[1]**

a) $-\frac{1}{55}$ b) $\frac{1}{55}$

c) -55 d) 55

11. Simplify the expression by using the suitable property. Also, name the property. **[1]**

$\left[\frac{1}{5} \times \frac{2}{15}\right] - \left[\frac{1}{5} \times \frac{2}{5}\right]$

12. Express 36 as a sum of successive odd natural numbers. **[1]**

13. Identify the greater number: 7.9×10^4 or 5.28×10^5 **[1]**

Section B

14. The product of two rational numbers is $\frac{-14}{27}$. If one of the numbers be $\frac{7}{9}$, find the other. **[2]**

15. Simplify and solve the linear equation:15(y – 4) – 2(y – 9) + 5(y + 6) = 0. **[2]**

16. Find the square root of 1764 by the Prime Factorisation Method. **[2]**

OR

Find the square root of 3481 by Division method.

17. If $5^{3x - 1} \div 25 = 125$, find the value of x. **[2]**

Section C

18. using appropriate properties find : $\frac{2}{5} \times \left(-\frac{3}{7}\right) - \frac{1}{6} \times \frac{3}{2} + \frac{1}{14} \times \frac{2}{5}$. **[3]**

19. Find the number of plants in each row, if 1024 plants are arranged, so that number of plants in a row is the same as the number of rows. **[3]**

OR

Find the least number which must be subtracted from 1989 so as to get a perfect square. Also find the square root of the perfect square so obtained.

20. The given table shows the crop production of a state in the year 2008 and 2009. Observe the table given below and answer the given questions. **[3]**

Crop	2008 Harvest (Hectare)	Increase/Decrease (Hectare) in 2009
Bajra	1.4×10^3	-100
Jowar	1.7×10^6	-440000
Rice	3.7×10^3	-100
Wheat	5.1×10^5	+190000

a. For which crop(s) did the production decrease?

b. Write the production of all the crops in 2009 in their standard form.

c. Assuming the same decrease in rice production each year as in 2009, how many acres will be harvested in 2015? Write in standard form.

OR

Evaluate: $\frac{125 \times x^{-3}}{5^{-3} \times 25 \times x^{-6}}$