

Entrance Test– Class 8th 2019Paper: Mathematics

Note: All questions are compulsory. Calculators are not allowed.

Q No. 1: Solve the following questions.

- Prove that $a^0=1$ where a is non-zero rational number.
- Simplify $(4^7 \div 4^5) \times 2^2$
- If $A=\{a,b,c,d\}$ and $B=\{a,c,e,g\}$ verify the commutative property of union.
- Prove that $(\frac{1}{4} + \frac{1}{2}) + \frac{1}{5} = \frac{1}{4} + (\frac{1}{2} + \frac{1}{5})$.
- Find value of X ; $\frac{x}{3} - 7 = 2$.

Q No. 2 (a): A number is half of another number. The sum of 3 times of first number and 4 times of 2nd number is 22. Find the numbers.

Q No 2 (b): If $x=3$, $y= -2$, $c= -1$ then find $\frac{x+c}{2y} \times \frac{x+y}{c}$.

Q No 3 (a): If $U=\{1,2,3,4,\dots\dots\dots 20\}$, $A=\{1,3,5,\dots\dots\dots 19\}$, $B=\{2,4,\dots\dots\dots 20\}$ Prove $A^c = B$

Q No. 3 (b): Find the area of an isosceles triangle ABC in which $m\overline{AB}=m\overline{AC}=6\text{cm}$ and $m\overline{BC}=8\text{cm}$.

Q No. 4 (a): if $x + \frac{1}{x} = 5$ then find value of $x^2 + \frac{1}{x^2}$.

Q No. 4 (b): The area of a rectangular park is equal to another square shaped park. Find the length of a square shaped park if the length and breadth of the rectangular park are 81m and 25m respectively.

Q No. 5 (a): Construct the parallelogram ABCD if $m\overline{AB}=4\text{cm}$ $m\overline{CB}=3\text{cm}$
 $m\overline{AC}=6\text{cm}$.

Q No 5 (b): Find power set if $A=\{a,e,i,o,u\}$.

Q NO 6 (a): Find square root of 585225 by division method.

Q No 6 (b): The diameter of the wheel of Ahmed bicycle is 0.72m. The bicycle wheel completes 750 revolutions when Ahmed comes from school to house. Find distance between school and house.