

LORVEN PUBLIC SCHOOL

(Affiliated to CISCE, New Delhi)
Anekal Road, Chandapura, Bangalore - 99

Annual Exam – 2020

Class: VII

MATHEMATICS

Time: 2 hrs 30 mins

Total Marks: 80

I. Fill in the blanks

10 X 1 = 10

1. The two angles are said to supplementary if the sum of the angles is _____
2. In equilateral triangle the three sides are _____
3. $\frac{5}{8}$ and $\frac{3}{10}$ are on the _____ side of zero
4. In $5^2 = 25$, base = _____ and index = _____
5. $15 \times 8 =$ _____
6. $9x - 5x =$ _____
7. 5% of 350 is _____
8. Coefficient of xy in $-3axy$ is _____.
9. The value of $2^4 =$ _____
10. Cube has _____ vertices.

II. Match the following

5 X 1 = 5

1. Reflection of (9, -3) on x axis	a. 360
2. EULERS formula	b. $\frac{1}{2}$
3. Angle around the points	c. $a^m \times a^n = a^{m+n}$
4. Proper fraction	d. $V + F - E = 2$
5. Product law	e. (-9, -3)

III. Choose the correct answer

10X1=10

1. Formula to find the simple interest is _____
i. $I = PTR$ ii. $I = PTR/100$ iii. $I = P/100$ iv. none
2. The cardinal number of the set $A = \{2,3,4,5\}$ is _____
i. 5 ii. 4 iii. 3 iv. none
3. If you multiply, $(-1) \times (-1) \times (-1) \times \dots \times (-1)$ 60 times the answer is
i. positive number ii. negative number iii. Both iv. none

4. Adding $\frac{7}{5}$ and $\frac{2}{5}$ you get
- i. $\frac{9}{5}$ ii. $\frac{8}{5}$ iii. $\frac{2}{5}$ iv. none
5. If C.P = 500 and gain = 25, then S.P will be,
- i. 625 ii. 100 iii. 23 iv. none
6. $\frac{37}{75}$ in lowest form is
- i. $\frac{7}{15}$ ii. $\frac{8}{15}$ iii. $-\frac{7}{15}$ iv. None
7. In a triangle ABC, if angle A = 45° and B = 75° find angle C
- i. 60° ii. 30° iii. 90° iv. none
8. $\frac{37}{1000}$ in decimal fraction is
- i. 0.037 ii. 3.7 iii. 0.0037 iv. none
9. 8^3 is
- i. 512 ii. 9300 iii. 9240 iv. none
10. $(3^0)^6$ is
- i. 1 ii. 10 iii. 81 iv. none

IV. In the given table find the a, b, c, d and e **5X1=5**

Using Euler's formula,

Faces	a	5	20	6	e
Vertices	6	b	12	d	2
Edges	12	9	c	12	3

V. Find the following (answer any ten) **10X2=20**

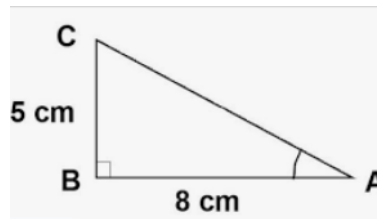
- Triangle ABC is right angled at A. Calculate the length of BC, if AB = 18 cm and AC = 24cm. [2]
- If $3x + 18$ and $2x + 25$ are supplementary: find the value of x. [2]
- State Pythagoras theorem [2]
- Find the sum of $4x+9y+7z$, $5y+4z-6x$ and $4y-8x+6z$ [2]
- A can do a piece of work in 12 days and B can do it in 16 days. How long will they take to complete it together? [2]
- Weight of 8 identical articles is 4.8 kg. What is the weight 11 such articles? [2]

7. Find the third side (hypotenuse) of the right-angled triangle of adjacent sides 30 cm and 40 cm [2]
8. Divide 64cm long string into two parts in the ratio 5:3 [2]
9. Find the area of a circle whose radius is 7cm [2]
10. Find the mean of 53, 61, 60, 67 and 64 [2]
11. Evaluate 5.897×2.3 [2]
12. A point P (7, 3) is reflected in X-axis to point P'. The point P' is further reflected in y-axis to point P''. Find:
 - i. The co-ordinates of p' [2]
 - ii. The co-ordinates of p'' [2]
13. Solve $1925 \times 101 - 1925$ [2]
14. Insert two fractions between 1 and $\frac{3}{11}$ [2]

VI. Solve the following any five

5X3=15

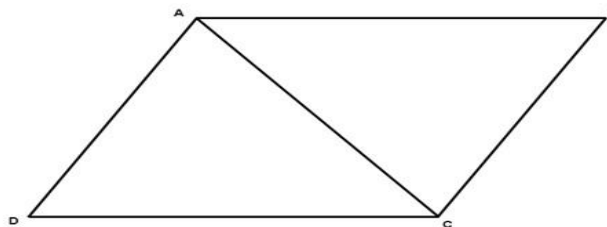
1. Evaluate $18 - (20 - 15 \div 3)$ [3]
2. Find the x such that $\frac{7}{-4} = \frac{x}{8}$ [3]
3. The cost of 11pens is $3\frac{2}{3}$. Find the cost of one pen. [3]
4. A machine is marked at Rs. 5000 and is sold at a discount of 10%. Find the selling price of the machine. [3]
5. Solve $(10^2)^3 \times (x^8)^{12}$ [3]
6. Find the value of x, when $2.5:4=x:7.5$ [3]
7. In a class of 60 children, 30% are girls. How many boys are there? [3]
8. Triangle ABC is right-angled at vertex A. calculate the length of BC, if AB = 18cm and AC = 24cm. [3]
9. Rohit bought a tape-recorder for Rs. 1500 and sold it for Rs. 1800. Calculate his percentage profit or loss. [3]
10. Find the area of the shape below. [3]



VII. Simplify the following (any four)

4X4=16

1. Construct $\triangle ABC$ such that $AB = 6$ cm, $BC = 4.5$ cm and $AC = 5.5$ cm. Construct a circumcircle for this triangle. [4]
2. Solve $4(3x-8) - 3(5x+3) - 2(6x-8)$ [4]
3. If $A = \{2, 4, 6, 8\}$ $B = \{3, 6, 9, 12\}$ find:
 - i) $(A \cap B)$ ii) $n(A \cap B)$ iii) $A - B$ iv) $n(A - B)$
 - v) $(A \cup B)$ vi) $n(A \cup B)$ [4]
4. Solve $1\frac{1}{5} \div \left\{ 2\frac{1}{3} - (5 + 2 - 3) \right\} - 3\frac{1}{2}$ [4]
5. Prove that:
 - i. $\triangle ABC \cong \triangle ADC$
 - ii. $\angle B = \angle D$ (angle B = angle D)



[4]

6. The following table shows the market positions of some brands of soap.

Draw a suitable bar graph:

[4]

Soap(brands):	A	B	C	D	E
No. of buyers	51	27	15	24	18

7. A box contains 3 yellow, 4 green and 8 blue tickets. A ticket is chosen at random. Find the probability that the ticket is: i) yellow ii) green iii) blue iv) red v) not yellow

[4]