



Sri Sumangala College - Panadura
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1st Term Test - March 2020

ශ්‍රේණිය } 10 Grade }	විෂයය } Subject }	ගණිතය	පත්‍රය } II Paper }	කාලය } Time }	පැය 03
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- Answer 10 questions selecting 5 questions from part A and 5 questions from part B.
- Each question carries 10 marks.

Part A

❖ Answer 5 questions

- 1) The price of 15 apples are Rs:750/=. A seller brought 500 apples. Out of them 12% apples were not in good condition to sell. Remaining apples were sold in a bag of 12 apples for Rs:750/=. Show that he could not get a profit more than 15%.
- 2) The number of books read by a group of grade 10 students during the month of January is given below.

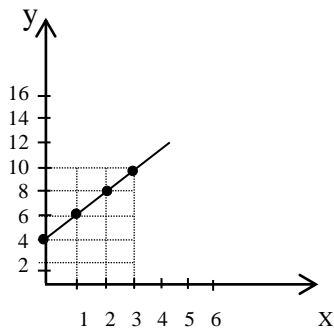
0 5 1 4 4 6 7 2 4 3 7 2
8 5 8 8 4 3 6 4 5 6 1 1
1 5 4 1 7 3 5 4 3 8 7 2
1 4 6 3 2 3 5 3 2 4 7 2

Copy the following table and complete .

Number of books	Tally marks	Number of student (f)

- i) What is the range of this data set?
- ii) Find the mode of data set?
- iii) Find the median of the data set?
- iv) Find the mean number of books read by a one student during this month hence estimate the number of books will be read by them during month of February 2020.

3) Using above graph of straight line



- I) Find the value of y when $x=6$
- II) Find the gradient of the above graph
- III) Find intercept of the graph and its equation.
- IV) Write the coordinates of intersecting point of x axis.
- V) Find the equation of straight line that passing through the point $(0,2)$ and to the above straight line.

4)

- I) Factorize
 - a. $2a^2 - 4ab$
 - b. $X^2 + 5x + 6$
 - c. $X^2 - 4$
- II) Expand the $(x-2)^2$ and verify the answer for $x=5$

5) The ration between two numbers are 5:2

- I) That numbers are increased by 1 and the ratio between them is 7:3 now. Find that originals numbers.
- II) Solve
$$x + 2y = 7$$
$$x + 3y = -2$$

6)

- I) The perimeter of the rectangular floor is 250m. The Painting cost of four walls is Rs:10/= per $1m^2$ and the total cost was Rs:15000/=. Find the height of the wall.
- II) A cuboid shape vessel with 12cm length 8cm width and 36cm height was filled with liquid up to $\frac{1}{3}$ of its capacity when certain amount of liquid from another bottle was poured in to the same vessel. Half of it was filled. Find the amount of liquid of the bottle?

Part B

❖ **Answer 5 questions**

7) The number pattern 6,9,12,15,.....

- I) Write the next two terms.
- II) Find the common distance.
- III) Find the n^{th} term.
- IV) Hence find the 50^{th} term of it.
- V) When term is 93 in this pattern.
- VI) Show that 112 is not a term of this pattern.

8)

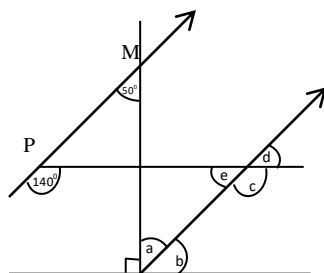
- I) Construct the straight line segment with $AB=6\text{cm}$.
- II) Draw two arcs taking A and B as the centers and the radius 9cm. Mark the intersection point of the two arcs as C.
- III) Draw the straight lines AC and BC.
- IV) Construct the perpendicular bisector of the BC.
- V) Draw the arc taking as the center and radius 4cm. Name the intersection point of the perpendicular bisector of the line BC as P.
- VI) Measure and write the length of line AP.

9) In the square ABCD, The point P and Q are on AB and AD respectively. Such that $BQ \perp CP$.

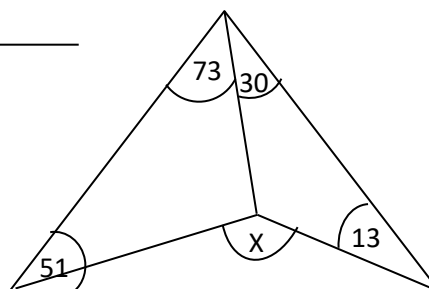
- I) Make the above intimation on the diagram.
- II) Show that $ABQ\Delta \cong BCP\Delta$
- III) Show that $BQ = CP$

10)

a. According to the giving information on the diagram find the value of a, b, c, d and e



b. Find the value of X



11) A private air craft from A approaches B after tracing 140Km on a bearing of 040° . It then travels 160Km on a bearing of 130° and approaches to C.

- I) Draw a rough sketch based above information.
- II) Draw scale diagram using the scale of 1cm representing 20Km.
- III) Using a scale diagram, Find the bearing of C from A and the distance from A to C.

12) The circular color disc is fixed the center and it can be rotated. Here the disc divide in to 8 equal sectors with 3 red sectors 4 blue sectors and 1 green sector. Sadali records the color of the sector on which the indicator stops Spinning.

- I) Write sample space of this experiment.
- II) Find $n(S)$?
- III) Find the probability of getting red.
- IV) If the probability of green either red or green is A, Find the $P(A)$ by writing the elements of A.
- V) Show that probability of getting either blue or red is greater than probability of getting red.