

## MT FIRST TERM - SUMMATIVE EXAMINATION - 2022

6 - STD

MATHEMATICS

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Time : 2.00 Hrs

Marks : 60

**I Choose the correct answer.**

8 X 1 = 8

- The difference between the successor and the predecessor of 99999 is  
a) 90000      b) 1      c) 2      d) 99001
- The whole number that does not have a predecessor is  
a) 10      b) 0      c) 1      d) none of these
- The value of  $y$  in  $y + 7 = 13$  is  
a)  $y = 5$       b)  $y = 6$       c)  $y = 7$       d)  $y = 8$
- The ratio of the number of sides of a triangle to the number of sides of a rectangle is  
a) 4 : 3      b) 3 : 4      c) 3 : 5      d) 3 : 2
- If a Barbie doll costs Rs. 90, then the cost 3 such dolls is Rs. ....  
a) 260      b) 270      c) 30      d) 93
- The line segment is denoted as  
a)  $AB$       b)  $\overline{AB}$       c)  $\overline{AB}$       d)  $\overline{AB}$
- The tally marks  $\overline{\text{||||}}$  represents the number count  
a) 5      b) 8      c) 9      d) 10
- The spaces between any two bars in a bar graph .....  
a) can be different      b) are the same  
c) are not the same      d) all of these

**II Fill in the blanks.**

5 X 1 = 5

- If Arulmozhi saves Rs. 12 per day, then she saves Rs. .... in 30 days.
- If A's age is  $n$  years now, 7 years ago A's age was .....
- Ratio of Rs. 3 to Rs. 5 = .....
- A line segment from point B to point A is denoted by .....
- The tally marks for number 8 in standard form is .....

**III Say true or false.**

5 X 1 = 5

- Successor of a one digit number is always a one digit number.
- 139 is rounded off as 100 to the nearest 100.
- 10 more to three times C is '10C + 3'.
- 10 books is to 15 books as 3 books is to 15 books.
- $20^\circ$  and  $70^\circ$  are complementary.

**IV Answer any seven questions from the following.**

7 X 2 = 14

19. Write the number name of the numeral 75, 32, 105 in the Indian system.
20. Simplify :  $24 + 2 \times 8 \div 2 - 1$ .
21. Find the estimated value of  $5598 + 689$ .
22. If  $g$  is equal to 300, what is the value of  $g-1$  and  $g+1$ ?
23. A piece of wire is 125 cm long. What will be the length of the side, if it is formed as an equilateral triangle?
24. Find the ratio of 500g to 250g.
25. By proportionality law, check whether 3:2 and 30:20 are in proportion.
26. Find the supplementary angle of  $70^\circ$ .
27. Write two examples for primary data.
28. How many triangles are there in the given figure?

**V Answer any four questions from the following.**

4 X 5 = 20

29. Arrange the following numbers in the descending order :  
128435, 10835, 21354, 6348, 25840.
30. Simplify :  $20 + [8 \times 2 + \{(6 \times 3) - (10 + 5)\}]$
31. Complete the table and find the value of  $K$  for which  $K/3$  gives 5.

K	3	6	9	12	15	18
$K/3$	1	2				

32. Kumaran has Rs. 600 and wants to divide it between Vimala and Yazhini in the ratio 2 : 3. Who will get more and how much?
33. Pari wants to buy 5 tennis balls from a sports shop. If a dozen balls cost Rs. 180, how much should Pari pay to buy 5 balls?
34. Thamarai is fond of reading books. The number of pages read by her on each day during the last 40 days are given below. Make a Tally Marks table.  
1 3 5 6 6 3 5 4 1 6 2 5 3 4 1 6 6 5 5 1  
1 2 3 2 5 2 4 1 6 2 5 5 6 5 5 3 5 2 5 1
35. Suppose you have two shorts, one is black and the other one is blue; three shirts which are in white, blue and red. You again wish to make different combinations, but you always want to make sure that the shorts and shirt that you wear are of different colours. List and check how many combinations are possible now.

**VI Answer any one of the following.**

1 X 8 = 8

36. Construct a line segment  $QR = 10\text{cm}$ , using ruler and compass.
37. Use a protractor to draw an angle  $90^\circ$ .

MT 6 - ஆம் வகுப்பு கனடும் (EM) பக்கம் - 2



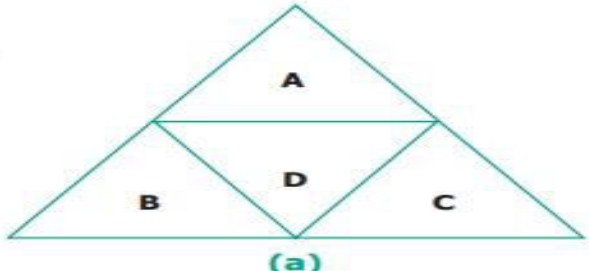
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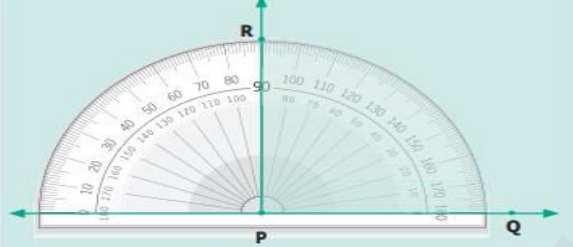
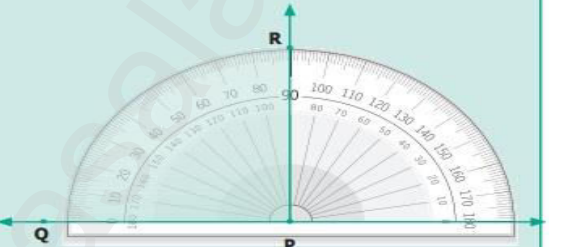




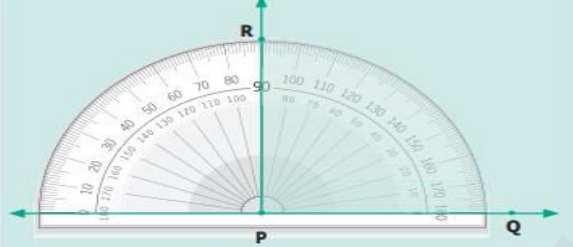
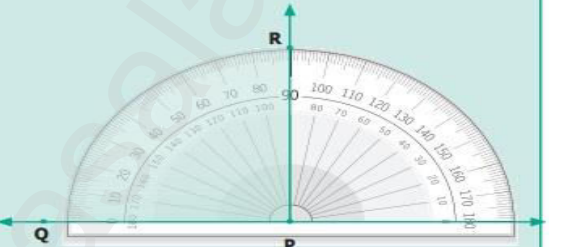




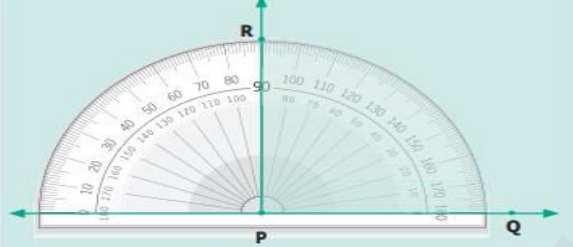
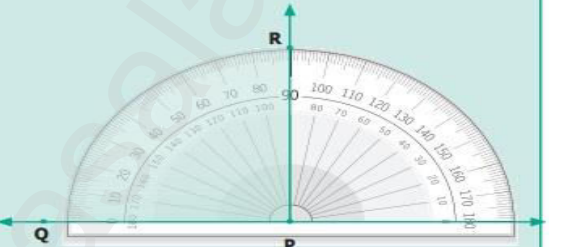


#4/4, Shiva Gardens, Chetpet Road, Aagaram Village,  
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### ANSWER KEY

Q.No	Solution	Mark
1	c) 2	1
2	b) 0	1
3	b) $y = 6$	1
4	b) 3 : 4	1
5	b) 270	1
6	d) $\overline{AB}$	1
7	c) 9	1
8	b) are the same	1
9	360	1
10	$n - 7$	1
11	3 : 5	1
12	$\overline{BA}$	1
13		1
14	False	1
15	True	1
16	False	1
17	False	1
18	True	1
19	75,32,105 = Seventy five lakh thirty two thousand one hundred and five.	2
20	$24 + 2 \times 8 \div 2 - 1$ (given question) $= 24 + 2 \times 4 - 1$ ( $\div$ operation, completed first) $= 24 + 8 - 1$ ( $\times$ operation, completed second) $= 32 - 1$ ( $+$ operation, completed third) $= 31$ ( $-$ operation, completed last)	2
21	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Actual value</p> <math display="block">\begin{array}{r} 8 \\ 689 \overline{) 5598} \\ \underline{5512} \\ 86 \end{array}</math> </div> <div style="text-align: center;"> <p>Estimated value</p> <math display="block">\begin{array}{r} 8 \\ 700 \overline{) 5600} \\ \underline{5600} \\ 0 \end{array}</math> </div> </div> <p>5600 is nearest to 5598            700 is nearest to 689            Hence, the estimated value of <math>5598 \div 689</math> is 8</p>	2
22	$g = 300$ $g - 1 = 300 - 1 = 299$ $g + 1 = 300 + 1 = 301$	2
23	<b>Equilateral triangle = 3 equal sides</b> A piece wire [circumference] = $12s$ one side length = $12s / 3 = 4s$	2
24	$500 \text{ g to } 250 \text{ g} = 500 : 250 = 500 / 250 = 500 \div 250 / 250 \div 250 = 2/1 = 2 : 1$ This is the ratio in the simplest form.	2
25	Here the extremes are 3 and 20 and the means are 2 and 30. Product of extremes, $ad = 3 \times 20 = 60$ . Product of means, $bc = 2 \times 30 = 60$ . Thus by proportionality law, we find $ad = bc$ and hence 3 : 2 and 30 : 20 are in proportion.	2
26	Supplementary angle of $70^\circ = 180^\circ - 70^\circ = 110^\circ$	2



27	<b>Examples (Primary data)</b> 1) List of absentees in the class. 2) A survey on writing habits of students conducted by a pen manufacturing company. 3) The types of leaves collected by students for studying nature.	2																								
28	A, B, C, D are four triangles. Combining A & D, B & D and D & C do not form any triangles. Combining A, B & D; A, C & D and B, D & C also do not form any triangles. Combining A, B, C & D = 1 triangle Total number of triangles = $4 + 1 = 5$  (a)	2																								
29	Descending order: 128435, 25840, 21354, 10835, 6348	5																								
30	$20 + [8 \times 2 + \{ \overline{6 \times 3} - 10 \div 5 \}]$ (given question) $= 20 + [8 \times 2 + \{ 18 - 10 \div 5 \}]$ (bar completed first) $= 20 + [8 \times 2 + \{ 18 - 2 \}]$ ( $\div$ completed second) $= 20 + [8 \times 2 + 16]$ ( $\{ \}$ completed third) $= 20 + [16 + 16]$ ( $\times$ completed fourth) $= 20 + 32$ ( $[ ]$ operation completed fifth) $= 52$ ( $+$ completed last)	5																								
31	<table border="1" data-bbox="199 1041 1364 1153"> <thead> <tr> <th>k</th> <th>3</th> <th>6</th> <th>9</th> <th>12</th> <th>15</th> <th>18</th> </tr> </thead> <tbody> <tr> <td><math>\frac{k}{3}</math></td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> </tbody> </table>	k	3	6	9	12	15	18	$\frac{k}{3}$	1	2	3	4	5	6	5										
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32	Divide the whole money into $2 + 3 = 5$ equal parts then, Vimala gets 2 parts out of 5 parts and Yashini gets 3 parts out of 5 parts. Amount Vimala gets = ₹ $600 \times \frac{2}{5} = ₹ 240$ Amount Yashini gets = ₹ $600 \times \frac{3}{5} = ₹ 360$ Vimala received ₹ 240 and Yashini gets ₹ 360, which is ₹ 120 more than that of Vimala.	5																								
33	By unitary method, we can solve this as follows : Cost of a dozen balls = ₹ 180 $\Rightarrow$ Cost of 12 balls = ₹ 180 Cost of 1 ball = $180/12 = ₹ 15$ Cost of 5 balls = $5 \times 15 = ₹ 75$ Hence, Pari has to pay ₹ 75 for 5 balls.	5																								
34	The Tally marks table is given below. <table border="1" data-bbox="199 1624 1045 2072"> <thead> <tr> <th>Number of pages</th> <th>Tally Marks</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>     </td> <td>7</td> </tr> <tr> <td>2</td> <td>    </td> <td>6</td> </tr> <tr> <td>3</td> <td>   </td> <td>5</td> </tr> <tr> <td>4</td> <td>  </td> <td>3</td> </tr> <tr> <td>5</td> <td>     </td> <td>12</td> </tr> <tr> <td>6</td> <td>    </td> <td>7</td> </tr> <tr> <td>Total</td> <td></td> <td>40</td> </tr> </tbody> </table>	Number of pages	Tally Marks	Frequency	1		7	2		6	3		5	4		3	5		12	6		7	Total		40	5
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35	<p>No. of shorts – 2 ————— No. of shirts – 3            Blue – 1; Black – 1 ————— Blue – 1 ; white–1 ; red – 1            Different combinations → different in combinations.  <b>Short</b>            Blue, Blue, Black            Black, Black, Blue  <b>Shirt</b>            White, Red, Blue            White, Red, Blue  <b>Answer:</b> '6' combinations</p>	5												
36	<p><math>\overline{QR} = 10</math> cm</p>  <p>(i) Draw a line l and mark a point Q on it.            (ii) Measure 10 cm using compass placing the pointer at O and the pencil pointer at 10 cm.            (iii) Place the pointer of the compass at Q then draw a small arc on the line l with the pencil pointer. It cuts the line l at a point and name that point as R.            (iv) Now <math>\overline{QR}</math> is the required line segment of length 10 cm.</p>	8												
37	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">Draw base ray</th> <th style="width: 50%; text-align: center;">Draw base ray</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"></td> <td style="text-align: center;"></td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;"></td> </tr> <tr> <td style="text-align: center;"> <p>Place the center of the protractor at the vertex P. Line up the ray PQ with the 0° line. Then draw and label a point (R) at the 90° mark on the inner scale (anticlockwise)</p> </td> <td style="text-align: center;"> <p>Place the center of the protractor at the vertex P. Line up the ray PQ with the 0° line. Then draw and label a point (R) at the 90° mark on the outer scale (clockwise)</p> </td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;"></td> </tr> <tr> <td style="text-align: center;"> <p>Remove the protractor and draw PR to complete the angle.            Now, <math>\angle P = \angle QPR = \angle RPQ = 90^\circ</math></p> </td> <td style="text-align: center;"> <p>Remove the protractor and draw PR to complete the angle.            Now, <math>\angle P = \angle QPR = \angle RPQ = 90^\circ</math></p> </td> </tr> </tbody> </table>	Draw base ray	Draw base ray					<p>Place the center of the protractor at the vertex P. Line up the ray PQ with the 0° line. Then draw and label a point (R) at the 90° mark on the inner scale (anticlockwise)</p>	<p>Place the center of the protractor at the vertex P. Line up the ray PQ with the 0° line. Then draw and label a point (R) at the 90° mark on the outer scale (clockwise)</p>			<p>Remove the protractor and draw PR to complete the angle.            Now, <math>\angle P = \angle QPR = \angle RPQ = 90^\circ</math></p>	<p>Remove the protractor and draw PR to complete the angle.            Now, <math>\angle P = \angle QPR = \angle RPQ = 90^\circ</math></p>	8
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Answer key is Typed and Prepared by :  
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Now I am working in Orange International Matric. Hr. Sec. School

