

## Class VI

## Subject: Mathematics

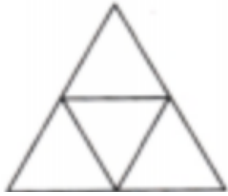
## Set B2

Time allowed : 2.5 hours

Maximum Marks: 60

**GENERAL INSTRUCTIONS:****Read the following instructions carefully and follow them:**

- (i) This question paper contains **16** questions. All questions are compulsory.
- (ii) Question paper is divided into **FIVE** sections—**Section A, B, C, D** and **E**.
- (iii) In **section A** – question number **1** has 12 multiple choice questions (MCQs) of **1** Mark each.
- (iv) In **section B** – question number **2** to **7** are Objective type questions of **2** marks each.
- (v) In **section C** – question number **8** to **10** are Short Answer (SA) type questions carrying **3** marks each.
- (vi) In **section D** – question number **11** to **13** are Long Answer (LA) type questions carrying **5** marks each.
- (vii) In **section E** – question number **14** to **16** are **source based/case study** questions carrying **4** marks each. Internal choice is provided in **2** marks question in each **source based/case study** question.
- (viii) There is no overall choice. However, an internal choice has been provided in 1 question in Section **B**, 2 questions in Section **C** and 2 questions in Section **D**.

<b>SECTION-A</b>		
<b>Question 1 consists of Multiple - Choice questions (i -xii) of 1 mark each.</b>		
<b>Q. No.</b>		<b>Marks</b>
<b>1.(i)</b>	What kind of numbers are 1,3,6,10,15? (a) triangular (b) square (c) odd (d) cubes	<b>1</b>
<b>(ii)</b>	Complete the sequence: 3,4,2,5,1,6,0,7, --- (a)1 (b) –1 (c)20 (d) 21	<b>1</b>
<b>(iii)</b>	How many lines of symmetry does a equilateral triangle have? (a) 3 (b) 5 (c) 4 (d) 2	<b>1</b>
<b>(iv)</b>	The number of acute angles in the given figure  (a) 12 (b) 9 (c) 10 (d) 20	<b>1</b>



<b>6.</b>	Construct a “Square with a Hole” where a square is of side 5 cm and circular hole of radius 1.5 cm.	<b>2</b>
<b>7.</b>	Suppose you start with 0 rupees in your bank account, and then you have credits of ₹ 30, ₹ 40, and ₹ 50, and debits of ₹ 40, ₹ 50, and ₹ 60. What is your bank account balance now?	<b>2</b>

**SECTION–C**

Q8 to Q10 is short answer type questions of 3 marks each.

<b>8.</b>	<p>The following pictograph shows the number of books borrowed by students, in a week, from the library of Middle School, Ginnori-</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #2e8b57; color: white;"> <th style="padding: 5px;">Day</th> <th style="padding: 5px;">Number of Books Borrowed</th> <th style="padding: 5px;">(  =1 Book )</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Monday</td> <td style="padding: 5px;"></td> <td></td> </tr> <tr> <td style="padding: 5px;">Tuesday</td> <td style="padding: 5px;"></td> <td></td> </tr> <tr> <td style="padding: 5px;">Wednesday</td> <td style="padding: 5px;"></td> <td></td> </tr> <tr> <td style="padding: 5px;">Thursday</td> <td style="padding: 5px;"></td> <td></td> </tr> <tr> <td style="padding: 5px;">Friday</td> <td style="padding: 5px;"></td> <td></td> </tr> <tr> <td style="padding: 5px;">Saturday</td> <td style="padding: 5px;"></td> <td></td> </tr> </tbody> </table> <p>(a) On which day were the maximum number of books borrowed? What may be the possible reason?</p> <p>(b) What was the total number of books borrowed during the week?</p> <p>(c) On which day was the minimum number of books borrowed?</p> <p style="text-align: center;"><b>OR</b></p> <p>The length in centimeters of 20 carrots are given as follows :  15, 22, 21, 20, 22, 15, 20, 20, 15, 20, 18, 20, 22, 21, 20, 21, 18, 21, 18, 20.</p> <p>Arrange the above data in a table using tally marks and  Answer the following question :  What is the number of carrots which have length more than 20 cm ?</p>	Day	Number of Books Borrowed	(  =1 Book )	Monday			Tuesday			Wednesday			Thursday			Friday			Saturday			<b>3</b>
Day	Number of Books Borrowed	(  =1 Book )																					
Monday																							
Tuesday																							
Wednesday																							
Thursday																							
Friday																							
Saturday																							
<b>9.</b>	Rahim mixes $\frac{2}{3}$ litres of yellow paint with $\frac{3}{4}$ litres of blue paint to make green paint. What is the total of green paint he has made?	<b>3</b>																					

10.

Construct a rectangle in which one of the diagonals divides the opposite angles into  $50^\circ$  and  $40^\circ$ .

OR

Construct a rectangle one of whose sides is 4 cm and the diagonal is of length 8 cm.

3

**SECTION-D**

**Q11 to Q13 is Long Answer type questions of 5 marks each.**

11.

The following information about a school's five separate batches of students. Draw a bar graph to represent the following data.

BATCHES	NUMBER OF STUDENTS
Batch 1	120
Batch 2	80
Batch 3	95
Batch 4	100
Batch 5	60

5

12.

Find the prime factors of largest 4- digit number and smallest 4- digit number . Find their common factor .

OR

In the treasure hunting game, Grumpy has kept treasures on 28 and 70. What jump sizes will land on both the numbers?

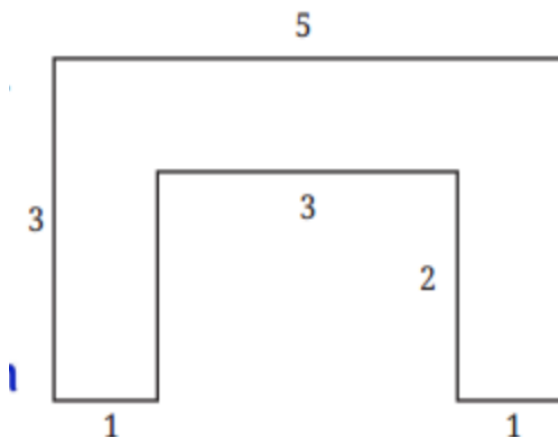
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13.

A farmer has a rectangular field with having length of 230 m and a breadth of 160 m. He wants to fence it with 3 rounds of rope . What is the total length of rope needed?

OR

By splitting the following figures into rectangles, find their areas (all measures are given in meters):



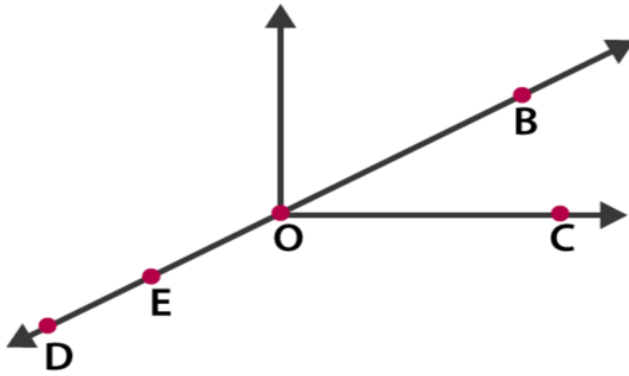
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**SECTION-E**

**Q14 to Q16 is Case study-based questions of 4 marks each.**

14.

Five friends are standing on the 5 points as shown in the figure.

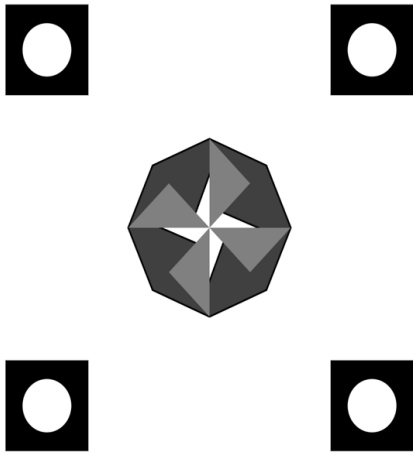


Answer the following questions, using the above figure.

- (i) Name a line in the given figure.
- (ii) Name all the points in the above figure.
- (iii)(a) Name any 4-line segments
- OR
- (iii)(b) Name any 2 rays in the given figure

1  
1  
2

15.



**The Magical Rangoli Competition**

In a school's annual Rangoli competition, students discovered an interesting pattern. The mathematics teacher explained that this year's theme is based on an ancient Rangoli design with a central octagon (representing unity), four corner squares (showing balance), and connecting triangles (depicting flow).

Answer the following:

- (i) How many lines of symmetry does the octagon in the centre have?
- (ii) How many lines of symmetry does the square have?
- (iii)(a) How many lines of symmetry does the circle have? Justify by answer by drawing the figure.
- OR
- (iii)(b) What is the angle of symmetry of a square? Justify by answer by drawing the figures.

1  
1  
2

