

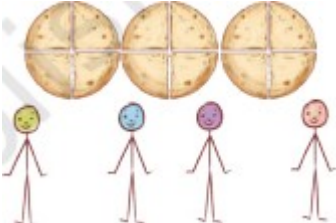
Class - VI
Mid Term Examination (2025-26)
Subject : Mathematics
Set B2

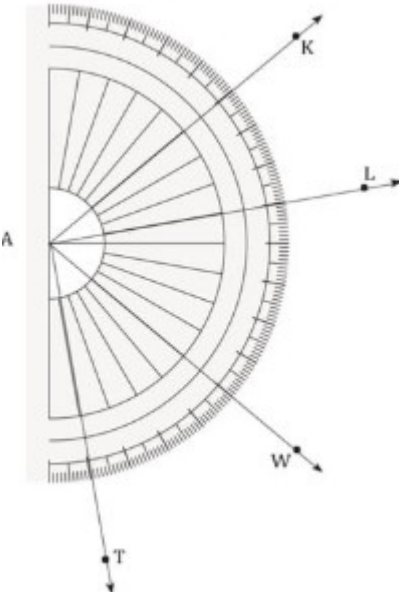
Time Allowed: $2\frac{1}{2}$ hours

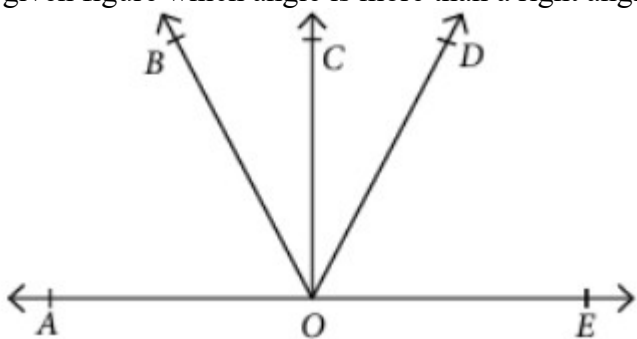
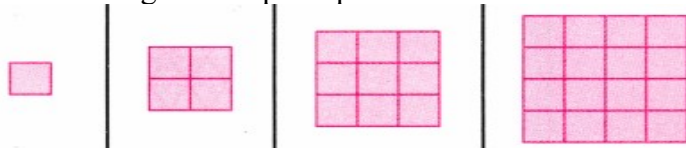
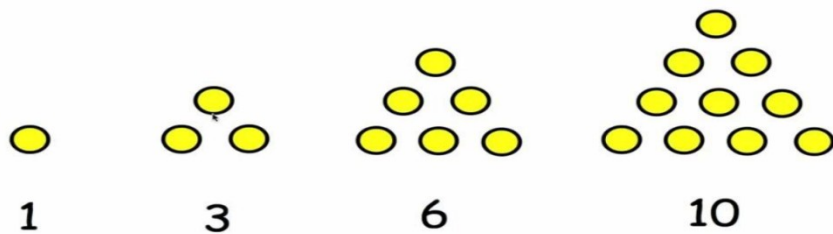
Maximum Marks: 60

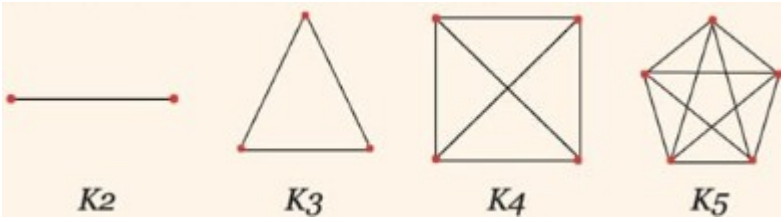
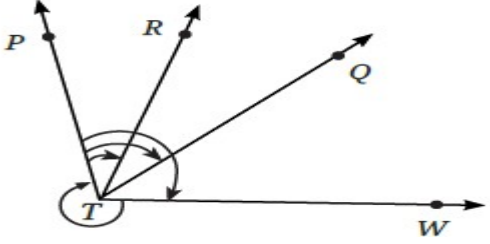
GENERAL INSTRUCTIONS:

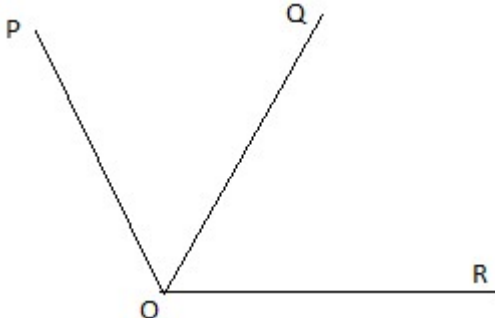
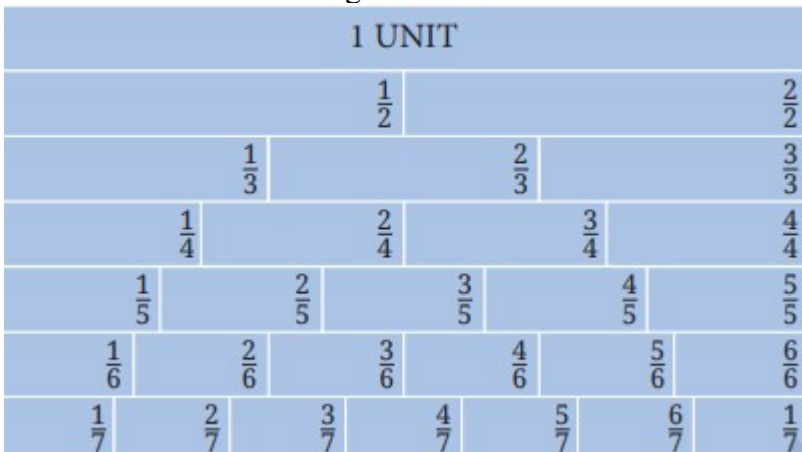
- (i) This question paper contains 16 questions. All questions are compulsory.
Question paper is divided into FIVE sections – Section A, B, C, D and E.
- (ii) In section A – question number 1 has multiple choice questions (MCQs) of 1 mark each.
- (iii) In section B – question number 2 to 7 are Objective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

SECTION - A		
Question 1 consists of Multiple Choice questions (i-xii) of 1 mark each.		
Q No.		Marks
1 (i)	Three rotis are shared equally by four children.  Fraction of roti each child gets is: (a) $\frac{4}{3}$ (b) $\frac{4}{7}$ (c) $\frac{3}{4}$ (d) $\frac{7}{4}$	1
(ii)	The fraction $\frac{54}{144}$ in lowest term is expressed as: (a) $\frac{3}{8}$ (b) $\frac{4}{8}$ (c) $\frac{3}{18}$ (d) $\frac{3}{6}$	1

(iii)	Figure out the number of whole units in the fraction $\frac{15}{4}$: (a) 1 (b) 2 (c) 3 (d) 4	1
(iv)	Which of the following is the smallest number whose prime factorization has three different prime numbers: (a) 30 (b) 8 (c) 27 (d) 21	1
(v)	Which of the following is a pair of twin primes: (a) 3 and 7 (b) 5 and 7 (c) 11 and 17 (d) 3 and 11	1
(vi)	A number for which the sum of all its factors is equal to twice the number is called: (a) Even number (b) odd number (c) perfect number (d) prime number	1
(vii)	What is the smallest number whose digit sum is 10? (a) 19 (b) 25 (c) 28 (d) 37	1
(viii)	How many numbers have two digits? (a) 100 (b) 90 (c) 99 (d) 90	1
(ix)	The measure of the angle $\angle KAL$ in the given figure is:  (a) 20° (b) 30° (c) 40° (d) 50°	1

(x)	In the given figure which angle is more than a right angle?  (a) $\angle BOD$ (b) $\angle AOD$ (c) $\angle BOC$ (d) $\angle AOC$	1
(xi)	Consider the given shape sequence:  How many small squares will be there in the next step of this shape sequence? (a) 20 (b) 25 (c) 36 (d) 49	1
(xii)	Number sequence 1,3,6,10, ... are called triangular numbers as shown below:  1 3 6 10 The 8th number in the above sequence is: (a) 15 (b) 21 (c) 28 (d) 36	1
	<u>SECTION – B</u> (Q 2 to 7 is Objective type questions of 2 marks each)	
2	Find equivalent fractions for the fractions $\frac{1}{10}$ and $\frac{5}{9}$ such that the fractional units are the same.	2
3	Find the common factors of 24 and 32.	2
4	State if the statement is ‘Always true’, ‘Only sometimes true’ or ‘Never true’. Give examples to support your answer. Statement: 4-digit number + 2-digit number gives a 6-digit number	2
5	Use a protractor to draw an angle having the degree measures 110° .	2
6	Given below is the sequence of power of 2.	2

	$2^0 = 1 \quad 2^1 = 2 \quad 2^2 = 4 \quad 2^3 = 8$  Write the next two steps in the above pattern.	
7	Count and write the number of lines in each shape in the sequence of Complete Graphs given below.  Which number sequence do you get? OR Identify the patterns and write the next four numbers to complete the given patterns. (a) 1, 3, 6, 10,,,, ... (b) 1, 4, 9, 16, 25, ...,,, ...	2
	<u>SECTION – C</u> (Q 8 to 10 is Short answer type questions of 3 marks each.)	
8	In the given figure, name the following: (a) Two rays (b) Two angles with a common arm. (c) An acute angle and a reflex angle.  OR Draw the letter 'Y' such that the three angles formed are 150°, 60° and 150°.	3
9	Complete the following pattern by writing the next three steps: $1 = 1$ $1 + 2 + 1 = 4$ $1 + 2 + 3 + 2 + 1 = 9$	3

	(b) Measure $\angle POQ$ and $\angle POR$ in the given figure. Also verify that $\angle POQ + \angle QOR = \angle POR$ 	3		
	SECTION – E (Q 14 to 16 is Source based/Case study questions of 4 marks each.)			
14	Consider the fraction wall given below:  Based on the above figure, answer the following questions: (i) Which is greater $\frac{2}{5}$ or $\frac{2}{4}$? (ii) Are the lengths $\frac{2}{4}$ and $\frac{3}{6}$ are equal? Justify your answer. (iii) (a) How many pieces of $\frac{1}{6}$ will make a length of $\frac{2}{3}$? OR (b) Represent $\frac{2}{5}$ on the number line.	1 1 2		
15	Numbers that have only two factors are called prime numbers or primes. Here are the first few primes—2, 3, 5, 7, 11, 13, 17, 19. PRIME AND COMPOSITE NUMBERS <table style="width: 100%; border-collapse: collapse;"><tr><td style="width: 50%; vertical-align: top; padding: 5px;"> 13 is a prime number because it has exactly 2 factors: 1 and 13 $1 \times 13 = 13$ </td><td style="width: 50%; vertical-align: top; padding: 5px;"> 12 is a composite number because it has more than 2 factors. $1 \times 12 = 12$ $3 \times 4 = 12$ </td></tr></table> The numbers 0 and 1 are neither prime nor composite.	13 is a prime number because it has exactly 2 factors: 1 and 13 $1 \times 13 = 13$	12 is a composite number because it has more than 2 factors. $1 \times 12 = 12$ $3 \times 4 = 12$	
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	Notice that the factors of a prime number are 1 and the number itself. The numbers that have more than two factors are called composite numbers. The first few composite numbers are—4, 9, 10, 12. Based on the above information, answer the following questions: (i) Out of 23 and 51, which is a prime number? Give reason to support your answer. (ii) State an even number which is also prime. (iii) (a) List 4 pairs of primes up to 100 with same digits. OR (b) List all the primes between 1 to 20.	1 1 2
16	The numbers that read the same from left to right and from right to left are called palindromes or palindromic numbers. For example: 4554, 1111... " Palindromic Numbers "  Based on the above information, answer the following questions: (i) Make the smallest 3-digit palindrome. (ii) Make all the possible 3-digit palindromes using the digits 1 and 2. (iii) (a) Find the sum of smallest and largest 3-digit palindrome? OR (b) The time now is 10:01. How many minutes until the clock shows the next palindromic time?	1 1 2