

Budha Dal Public School Patiala (11 Sept. 15)

UNIT - 1
Class-VIII
Mathematics

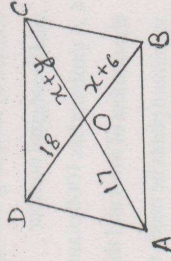
Marks: 90

Time: 3 hrs.

Note: Attempt all questions:

1. Q1 to Q10 carry 2 marks each.
2. Q11 to Q20 carry 3 marks each.
3. Q21 to Q30 carry 4 marks each.

Section - A



Q29. ABCD is parallelogram
find x and y

Q30. Using identities, find

- (i) $(xyz - 2) (xyz - 2)$
- (ii) $\left(\frac{x}{2} - \frac{y}{3}\right) \left(\frac{x}{2} + \frac{y}{3}\right)$

Q1. Write two rational numbers between $-\frac{2}{5}$ and $\frac{1}{2}$.

Q2. Solve $\frac{7y+4}{y+2} = \frac{-4}{3}$ for y.

Q3. How many sides does a regular polygon have if each of its interior angle is 165° ?

Q4. Find the probability of getting a prime number in throw of a die.

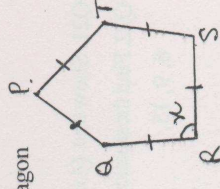
Q5. Find the product of $(5 - 3x)$ and $(4 + x)$.

Q6. Subtract $2p^2q - 4pq + 3pq^2 - 8p$ from $18 - 3p - 11q + 5pq$

Q7. Express 49 as sum of 7 consecutive odd numbers.

Q8. Is $\frac{7}{9}$ the multiplicative inverse of $-1\frac{2}{7}$? Give reasons.

Q9. Find x, if PQRST is a regular pentagon



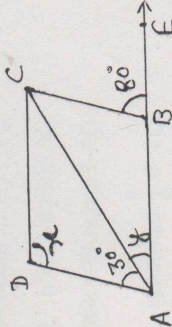
Q10. Obtain the volume of rectangular box with length, breadth and height as xy , $4xy^2$, x^2y respectively.

Section - B

Q11. Represent these numbers on different number lines.

$\frac{7}{3}$ and $\frac{-5}{7}$

- Q12. Solve for x , $5x - 2(2x - 7) = 2(3x - 1) + \frac{7}{2}$
- Q13. Find the square root of 51.84 by long division method.
- Q14. Using identity find 5.1×5.3
- Q15. Write a pythagorean triplet whose one member is 16.
- Q16. Find the square root of 9216 by the prime factorisation method.
- Q17. Simplify $a(a^3 + a^2 + 2) + 3$ and then find its value for $a = -1$.
- Q18. The sum of three consecutive multiples of 11 is 363. Find these multiples.
- Q19. Two adjacent angles of a parallelogram are in the ratio 3:2. Find the measure of each of the angles of a parallelogram.



Q20. ABCD is a parallelogram. Find x and y

Section - C

- Q21. Show that $(4x + 3y)^2 + (4x - 3y)^2 = 32x^2 + 18y^2$ (use identities)
- Q22. Find the smallest square number which is divisible by each of the numbers 6, 9, 15.

Q23. The sum of the digits of a two - digit number is 12. If the new number formed by reversing the digits is greater than the original number by 54, find the original number.

Q24. A gardener has 1000 plants. He wants to plant these in such a way that the number of rows and the number of columns remain same. Find the minimum plants he needs more for this.

Q25. The weights of 35 students (in kg) are given below: 48, 51, 47, 62, 48, 40, 50, 62, 53, 40, 48, 56, 50, 62, 42, 55, 52, 48, 46, 45, 54, 52, 50, 47, 44, 54, 55, 60, 61, 63, 58, 55, 60, 58, 53. Prepare a frequency distribution table taking equal class size. One such class is 40 - 45 where 45 is not included.

Q26. Construct a rhombus PQRS is $PR = 5.6\text{cm}$, $QS = 6.4\text{cm}$, write steps of construction.

Q27. Construct a quadrilateral MIST, $MI = 3.5\text{cm}$, $IS = 6.5\text{cm}$ $\angle M = 75^\circ$, $\angle I = 105^\circ$, $\angle S = 120^\circ$

Q28. The number of students in a hostel speaking different languages is given below. Display the data in a pie chart

Language	Hindi	Eng.	Marathi	Tamil	Bengali	Total
No. of students	40	12	9	7	4	72