

KENDRIYA VIDYALAYA SANGATHAN- TINSUKIA REGION
SESSION ENDING EXAMINATION 2018-2019
SUBJECT - MATHEMATICS
CLASS - VII

Time: 2Hrs 30 Min

Total Marks: 80

General Instructions:

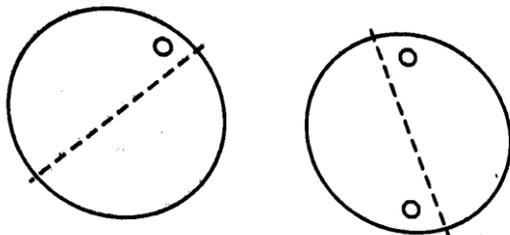
1. All questions are compulsory.
 2. The question paper consists of 30 questions divided into four sections A, B, C, and D.
 3. Section-A comprises of 6 questions of 1 markeach.
 4. Section-B comprises of 6 questions of 2 marks each.
 5. Section-C comprises of 10 questions of 3 marks each.
 6. Section-D comprises of 8 questions of 4 marks each.
 7. There is no overall choice in this question paper.
 8. Use of a calculator is not permitted.
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SECTION – A (1 mark each)

1. Find the mode : 3,2,1,2,1,1
2. Add: 3 mn , -5 mn , 8 mn , -4 mn
3. Write the formula for circumference and area of the circle.
4. What is 15% of 20?
5. Express 343 as a power of 7.
6. Sum of all angles of a triangle is 180° . (True/False)

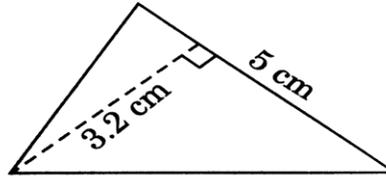
SECTION – B (2 marks each)

7. Find the mean of the first ten natural numbers.
8. Given the line(s) of symmetry, find the other hole(s):

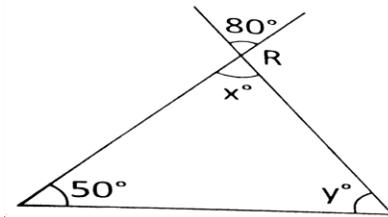


9. Find the sum: $\frac{-9}{10} + \frac{22}{15}$

10. Find the area of the following triangle:



11. Find the value of 'x' and 'y' in the below figure:



12. Find the value of x, if 45% of marks x is 405.

SECTION – C (3 marks each)

13. Write the following numbers in the expanded forms:

- a. 3006194
- b. 20068

14. Which is greater in each of the following:

- a. $\frac{2}{3}, \frac{5}{2}$
- b. $\frac{-3}{4}, \frac{2}{-3}$

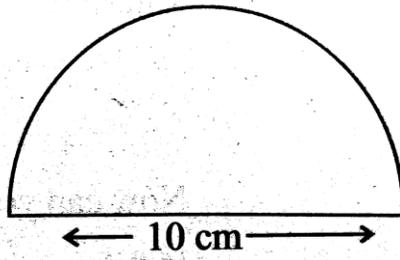
15. Construct a ΔPQR with $PQ = 4$ cm, $QR = 3.5$ cm and $PR = 4$ cm. What type of a triangle is this?

16. Identify the terms and their factors in the following expressions show the term and factors by tree diagrams.

- a. $1 + x + x^2$
- b. $5xy^2 + 7x^2y$

17. The perimeter of a rectangle is 130 cm. If the breadth of the rectangle is 30 cm, find its length. Also, find the area of the rectangle.

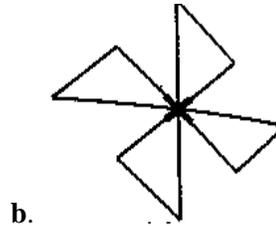
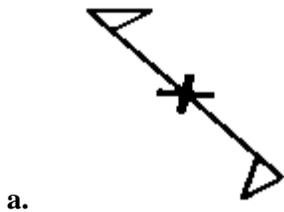
18. Express each of the following as the product of powers of their prime factors:
- 648
 - 3600
19. Simplify by combining like terms:
- $21b - 32 + 7b - 20b$
 - $p - (p - q) - q - (q - p)$
 - $ab - 4a, 4b - ab, 4a - 4b.$
20. A tree is broken at a height of 5 metre from the ground and its top touches the ground at a distance of 12 metre from the base of the tree. Find the original height of the tree.
21. Write the following rational numbers in ascending order:
- $\frac{1}{3}, \frac{-2}{9}, \frac{-4}{3}$
 - $\frac{-3}{5}, \frac{-2}{5}, \frac{-1}{5}$
22. Find the perimeter of the given figure, which is a semicircle including its diameter.



SECTION – D (4 marks each)

23. Simplify and express each of the following in exponential form
- $2^0 + 3^0 + 4^0$
 - $\frac{2^3 \times 3^4 \times 4}{3 \times 32}$
24. Construct ΔABC , given $m\angle A = 60^\circ$, $m\angle B = 30^\circ$ and $AB = 5.8$ cm.
25. If Meena gives an interest of Rs.45 for one year at 9% rate p.a. What is the sum she has borrowed?
26. A picture is painted on a cardboard 8 cm long and 5 cm wide such that there is a margin of 1.5 cm along each of its sides. Find the total area of the margin.
27. From the sum of $4 + 3x$ and $5 - 4x + 2x^2$ subtract the sum of $3x^2 - 5x$ and $-x^2 + 2x + 5$.
28. Find:
- $\frac{-6}{13} - \left(-\frac{7}{15}\right)$
 - $\frac{-7}{12} \div \frac{-2}{13}$

29. Give the order of rotational symmetry for each figure:



30. Three cubes with 2 cm edge are placed side by side to form a cuboid. Sketch an oblique or isometric sketch of this cuboid.
