

KOTHARI INTERNATIONAL SCHOOL, NOIDA
ANNUAL EXAMINATION, SESSION: 2025-26
GRADE: 7 SUBJECT: MATHEMATICS
SET A SECTION B (SUBJECTIVE)

DAY & DATE: MONDAY - MARCH 9, 2026

MAXIMUM MARKS: 60

TIME ALLOTTED: 2 HOURS 30 MINUTES

NAME: _____

ROLL NO: _____

GENERAL INSTRUCTIONS:

1. This question paper consists of 2 pages and 22 questions. All questions are compulsory.
2. The paper contains three type of questions
 - Q. No. 1 to 11 is of 2 marks each.
 - Q. No. 12 to 17 is of 3 marks each.
 - Q. No. 18 to 22 is of 4 marks each.
3. Read the question paper carefully and then attempt it.

Q1. If the three sides of a triangle are $3a + 4b - 2$, $a - 7$ and $2a - 4b + 3$, what will be its perimeter? 2

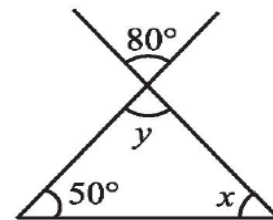
Q2. Represent the following situations in the form of equations: 2

(a) Raju's father's age is 5 years more than three times Raju's age. If Raju's father is 44 years old, set up an equation to find Raju's age (suppose 'r').

(b) A shopkeeper sells mangoes in two types of boxes, small and large. A large box contains as many as 8 small boxes plus 4 loose mangoes. Set up an equation which gives the number of mangoes in each small box (suppose 's'), if the number of mangoes in the large box is given to be 100.

Q3. Draw the rough sketch for the net of a Tetrahedron/Triangular Pyramid. 2

Q4. Find the value of x and y in the adjoining figure. 2



Q5. By what number should $(-12)^{-1}$ be divided so that the quotient may be equal to $(-4)^{-1}$? 2

Q6. Solve: $\frac{x+2}{x-2} = \frac{7}{3}$ 2

Q7. Represent the following rational numbers on a number line: 2

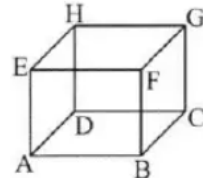
(a) $\frac{3}{4}$ (b) $\frac{-7}{4}$

Q8. If $a = (4/5)^{-1} \div (8/7)^0$, then find the value of a^2 . 2

Q9. Akshay borrowed ₹7000 from a friend at the rate of 3.5% p.a. simple interest for two years. Find the amount to be paid by Akshay at the end of the second year. 2

Q10. Find 4 rational numbers between $\frac{-5}{7}$ and $\frac{-3}{8}$. 2

Q11. Observe the given figure and answer the following: 2



(a) Name the common vertices in the faces EHGF and DCGH.

(b) Give all the edges that are perpendicular to edge AB.

Q12. Two poles of heights 6 m and 11 m stand on a plane ground. If the distance between their feet is 12 m, find the distance between their tops. 3

Q13. Each of the 2 equal sides of an isosceles triangle is twice as large as the third side. If the perimeter of the triangle is 30 cm, find the length of each side of the triangle. 3

Q14. Simplify the expression $4(x + y) + 7y - 4x - 3$ and then find its value for $x = -2$ and $y = 1$. 3

Q15. The two sides of the parallelogram ABCD are 6cm and 4cm. The height corresponding to the base CD is 3cm. Find the: 3

(a) area of the parallelogram.

(b) the height corresponding to the base AD.

Q16. Draw and name, wherever possible, a rough sketch of: 3

(a) a triangle with both line and rotational symmetries.

(b) a triangle with only line symmetry and no rotational symmetry.

(c) a quadrilateral with a rotational symmetry but not a line of symmetry.

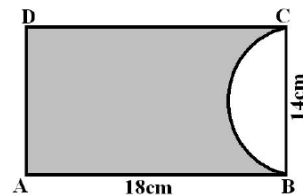
Q17. If $P = a^2 - b^2 + 2ab$, $Q = a^2 + 4b^2 - 6ab$, $R = b^2 + b$, $S = a^2 - 4ab$, and $T = -2a^2 + b^2 - ab + a$. Find $P + Q + R + S - T$. 3

Q18. A sum of ₹500 is in the form of denominations of ₹5 and ₹10. If the total number of notes is 90, find the number of notes of each type. 4

Q19. By taking $x = \frac{-5}{3}$, $y = \frac{2}{7}$, and $z = \frac{-1}{4}$, verify that: $x \div (y - z) \neq (x \div y) - (x \div z)$ 4

Q20. A fruit seller purchased 20 kg of apples at ₹ 50 per kg. Out of these, 5% of the apples were found to be rotten. If he sells the remaining apples at ₹ 60 per kg, then find his gain or loss percentage. 4

Q21. A paper is in the form of a rectangle ABCD in which AB=18cm and BC=14cm. A semicircular portion with BC as diameter is cut off. Find the area of the remaining paper. 4



Q22. Do as directed: 4

(a) Express: (i) 427500000 in standard form. (ii) 8.235×10^{11} in usual form.

(b) Simplify: $(2^{-1} \div 5^{-1})^2 \times \left(\frac{-5}{8}\right)^{-1}$