KOTHARI INTERNATIONAL SCHOOL, NOIDA
ANNUAL EXAMINATION, SESSION: 2025-26
GRADE: 8 SUBJECT: MATHEMATICS
SET B 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 3 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. Factorize: $7x^2 - 63y^2$ **2**

Q2. Find m, if $10.5m = (12.5)^2 - 6.25 + (2.5)^2$ **2**

Q3. A batch of bottles was packed in 25 boxes, with 12 bottles in each box. If the same batch is packed using 20 bottles in each box, how many boxes would be filled? **2**

Q4. The circumference of the base of a right circular is 220 cm. if the height of the cylinder is 2 m, then find the curved surface area of the cylinder. **2**

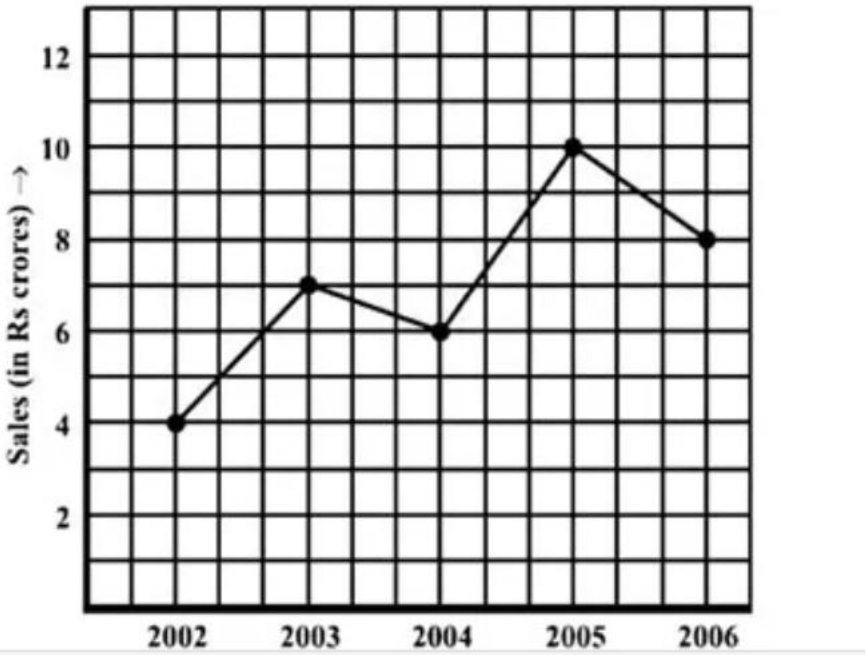
Q5. What is the share of A when Rs.24 are divided between A and B so that A gets Rs 8 more than B? **2**

Q6. Find the amount on Rs.5050 for 24 months at the rate of 10% per annum the interest being compounded annually. **2**

Q7. A gardener planted 1,521 trees in rows such that the number of rows was equal to the number of plants in each row. Find the number of rows. **2**

Q8. The volume of two cubes is in the ratio 1331 : 3375. Find the ratio of their surface areas. **2**

Q9. The following line graph shows the yearly sales figure for a manufacturing company: **2**
(a) Compute the difference between the sales in 2002 and 2006.
(b) In which year was the increase in the sales as compared to the previous year maximum**?**



Q10. Find k if $0.7k - 1.9 = 0.3(k + 14)$ **2**

Q11. Find the smallest whole number by which 1008 be multiplied so that it becomes a perfect square number. **2**

Q12. Check whether $3y^2 + 5$ is a factor of $6y^5 + 15y^4 + 16y^3 + 4y^2 + 10y - 35$. **3**

Q13. Rain water which falls on a flat rectangular surface of length 6 m and breadth 4 m is transferred into a cylindrical vessel of internal radius 20 cm. What will be the height of water in the cylindrical vessel if the rain fall is 1 cm. (Take $\pi = 3.14$) **3**

Q14. A general wishing to draw up his 64019 men in the form of a solid square, found that he had 10 men over. Find the number of men in each row. **3**

Q15. A garment dealer allows his customers 10% discount on a marked price of the goods and still makes a profit of 25%. What is the cost price if the marked price of a shirt is Rs 1250? **3**

Q16. (a) If $x - \frac{1}{x} = 7$ find the value of $x^2 + \frac{1}{x^2}$ **3**

(b) Find the value of a if $8a = 35^2 - 27^2$

Q17. Find the side of a cube whose volume is equal to that of a cuboid of dimensions 75 mm by 4 cm by 9 mm. **3**

Q18. Subtract the sum of $3l - 4m - 7n^2$ and $2l + 3m - 4n^2$ from the sum of $9l + 2m - 3n^2$ and $-3l + m + 4n^2$. **4**

Q19. 120 men had food provisions for 200 days. After 5 days, 30 men died due to an epidemic. How long will the remaining food last? **4**

Q20. The cost of a notebook is Rs.10. Draw a graph after making a table showing the cost of 2, 3, 4 …Notebooks. Use it to find: **3**

(a) The cost of 7 notebooks **½**

(b) The number of notebooks purchased with Rs 50. **½**

Q21. Anup after retirement thought to stay in village's house. After going there, he found there was shortage of water in village, so he thought of constructing a well. He hired some labourers and guided them that well should be 7 m in diameter and 20 m deep.

Based on the above information, answer the following questions: **1**

(a) What is the shape of the well? **1**

(b) What is circumference of the base of well?

(c) What will be the volume of the earth dug out to construct the well? **2**

OR

(c) What will be the total surface area of the well?

Q22. Anima left one half of her property to her daughter one third to her son and donated the rest to an educational institute. The donation was worth ₹ 100000.

Based on the above situation, answer the following questions:

(a) Write a linear equation based on the above information **1**

(b) How much money did Anima have? **2**

(c) How much money did Anima gave to her son and daughter respectively? **1**