

**KOTHARI INTERNATIONAL SCHOOL, NOIDA**  
**ANNUAL EXAMINATION , SESSION 2025-2026**  
**GRADE: 6 SUBJECT: MATHEMATICS**  
**SET: A SECTION B (SUBJECTIVE)**

**DAY & DATE : TUESDAY, 24<sup>th</sup> FEBRUARY 2026**

**MAXIMUM MARKS: 60**

**TIME ALLOTTED: 2 HOURS 30 MINUTES**

**NAME: \_\_\_\_\_**

**ROLL NO: \_\_\_\_\_**

**GENERAL INSTRUCTIONS:**

1. This question paper consists of 4 pages and 22 questions. All questions are compulsory.



2. The paper contains three type of questions

- Q. No.1 to 11 are of 2 marks each.
- Q. No.12 to 17 are of 3 marks each.
- Q. No.18 to 22 are of 4 marks.

3. Read the question paper carefully and then attempt it.

<b>SECTION B</b>																		
<b>Q1.</b>	A shape looks identical when rotated by 45°, 90°, 135°, and so on until 360°. a) What is its order of rotational symmetry? b) What regular shape could it be?	(2)																
<b>Q2.</b>	Check whether the fractions $\frac{12}{18}$ and $\frac{15}{25}$ are equivalent or not. Show the working.	(2)																
<b>Q3.</b>	A lift starts at the ground floor (0). It goes up 8 floors, then down 10 floors, and finally up 6 floors. Where does it stop?	(2)																
<b>Q4.</b>	The sum of two integers is 560 . If one of the integers is -194, find the other.	(2)																
<b>Q5.</b>	<p>In a strategy game, players manage a 4×4 grid of supercells, each represented by a five-digit number. The current grid contains some supercells with special properties. The challenge is to analyze the existing grid, identify all the supercells. This task tests your observation and problem-solving skills to optimize the grid layout effectively.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <tbody> <tr> <td style="text-align: center;">61000</td> <td style="text-align: center;">60800</td> <td style="text-align: center;">61500</td> <td style="text-align: center;">61200</td> </tr> <tr> <td style="text-align: center;">60600</td> <td style="text-align: center;">61800</td> <td style="text-align: center;">60700</td> <td style="text-align: center;">60500</td> </tr> <tr> <td style="text-align: center;">60300</td> <td style="text-align: center;">60400</td> <td style="text-align: center;">62000</td> <td style="text-align: center;">60200</td> </tr> <tr> <td style="text-align: center;">60000</td> <td style="text-align: center;">60100</td> <td style="text-align: center;">59900</td> <td style="text-align: center;">59800</td> </tr> </tbody> </table> <p>Identify and write all the supercells.</p>	61000	60800	61500	61200	60600	61800	60700	60500	60300	60400	62000	60200	60000	60100	59900	59800	(2)
61000	60800	61500	61200															
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60300	60400	62000	60200															
60000	60100	59900	59800															
<b>Q6.</b>	Write down the complete Collatz sequence for the starting number 64.	(2)																
<b>Q7.</b>	<p>Represent the following fractions on the number line:</p> <p>(i) <math>\frac{7}{8}</math></p> <p>(ii) <math>\frac{12}{9}</math></p>	(2)																



<p><b>Q16.</b></p>	<p>Radha and her three cousins visited a fair. They bought a large rectangular chikki and decided to share it equally. The shopkeeper cut the chikki into 12 equal parts, similar to the chikki division. Radha ate 3 parts, while each cousin ate 2 parts. After eating, they compared how much each one had eaten and tried converting their shares into fractional units. Radha wanted to know if she ate more than each cousin and if her share could be written in lowest terms.</p>  <p>Based on the above, answer the following questions :</p> <p>(a) Express the fraction of chikki Radha and her cousin ate in lowest form.</p> <p>(b) Who ate more and by how much?</p>	<p>(1) (2)</p>
<p><b>Q17.</b></p>	<p>A square-shaped park ABCD of side 100m has two equal rectangular flower beds, each of size 10m × 5m. What is the area of the remaining park?</p>	<p>(3)</p>
<p><b>SECTION D</b></p>		
<p><b>Q18.</b></p>	<p>A student had always found math problems a bit tedious, but this one was different. His teacher had given him a challenging puzzle: start with the number 9210 and find its Kaprekar's sequence. "Kaprekar's sequence?" He thought. "It sounds like a secret code." As he began arranging the digits and performing the subtractions, he felt like a detective, getting closer to a hidden secret with each step.</p>  <p>(a) Show the steps for the number 9210 to reach the constant.</p> <p>(b) What is Kaprekar's constant for 4-digit numbers?</p>	<p>(3) (1)</p>
<p><b>Q19.</b></p>	<p>(a) Using the number line, write the integer which is 6 more than -5.</p> <p>(b) When I am added to - 25, the result is - 41.</p> <p>Who am I?</p> <p>(c) Simplify the following :</p> <p><math>(-17)-(-33)+(-8)-(+4)</math></p>	<p>(1)  (1)  (2)</p>

