

KOTHARI INTERNATIONAL SCHOOL, NOIDA
HALF YEARLY EXAMINATION, SESSION: 2025-26
GRADE: 8 SUBJECT: MATHEMATICS
SET B (OBJECTIVE)

DAY & DATE: TUESDAY – SEPTEMBER 23, 2025

MAXIMUM MARKS: 20

TIME ALLOTTED: 30 MINUTES

NAME: _____

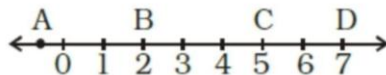
ROLL NO: _____

GENERAL INSTRUCTIONS:

- i). This question paper consists of 2 pages and 20 questions.*
- ii). Question Nos.1 to 20 carries 1 mark each.*
- iii). It is compulsory to attempt all the questions.*
- iv). Read the question paper carefully and then attempt it.*

SECTION A

- Q1. If PQRS is a parallelogram, then $\angle P - \angle R$ is equal to** (1)
a. 60° b. 90° c. 80° d. 0°
- Q2. Which of the following is a binomial?** (1)
a. $7(a) + a$ b. $6a + 7b + 2c$ c. $4a \times 3b$ d. $6(a^2 + b)$
- Q3. A rational number added to its reciprocal is 2. Which of the following can it be?** (1)
a. 0 b. 1 c. -2 d. $\frac{1}{2}$
- Q4. Which letter best represents the location of $\sqrt{25}$ on a number line?** (1)



- a. A b. B c. C d. D
- Q5. If $x = 2$, which expression gives the greatest value?** (1)
a. $2x$ b. $x+5$ c. x^2+2 d. $3x - 1$
- Q6. Which of the following is a linear expression?** (1)
a. x^2+1 b. $y + y^2$ c. 4 d. $1 + z$
- Q7. The value of $1+3+5+7+9+11+13+15+17+19+21+23$ is a:** (1)
a. Prime Number b. Negative Number c. Perfect Square d. Odd Number
- Q8. Which of the following figures has two pairs of equal adjacent sides?** (1)



- a. P and S b. Q and R c. Only R d. R and S

- Q9. In a pie chart, a sector representing 180° corresponds to what fraction of the whole? (1)
 a. $\frac{1}{2}$ b. $\frac{1}{3}$ c. $\frac{1}{4}$ d. $\frac{1}{6}$
- Q10. Which of the following is equal to 3^{-2} ? (1)
 a. $\frac{1}{6}$ b. $\frac{1}{9}$ c. $-\frac{1}{9}$ d. $\frac{1}{3}$
- Q11. **Assertion:** The degree of the expression $5x^3 + 2x^2 - x + 7$ is 2. (1)
Reason: The degree of a polynomial is the highest power of the variable.
 a.) Both assertion and reason are correct and reason is the correct explanation of assertion.
 b.) Both assertion and reason are correct but reason is not the correct explanation of assertion.
 c.) Assertion is correct but reason is false.
 d.) Assertion is false but the reason is correct.
- Q12. **Assertion:** $\left(\frac{2}{3}\right)^3 = \frac{8}{27}$ (1)
Reason: A rational number raised to a power means raising both numerator and denominator to that power.
 a.) Both assertion and reason are correct and reason is the correct explanation of assertion.
 b.) Both assertion and reason are correct but reason is not the correct explanation of assertion.
 c.) Assertion is correct but reason is false.
 d.) Assertion is false but the reason is correct.
- Q13. In a pie chart, if 3 sectors are 90° , 60° , and 120° , then the angle of the fourth sector is (1)
 _____.
- Q14. If x is an odd number, then the next odd number is _____. (1)
- Q15. A coin is tossed once. The probability of getting a head or a tail is _____. (1)
- Q16. If y is the reciprocal of x , then the reciprocal of y^2 in terms of x will be _____. (1)
- Q17. _____ natural numbers lie between 25^2 and 26^2 (1)
- Q18. Three years ago, the age of boy was y years. His age 2 years ago was $(y - 2)$ years. (1)
 (True / False)
- Q19. The square of every natural number is always greater than the number itself. (1)
 (True / False)
- Q20. For a fixed base, if the exponent decreases by 1, then the number becomes one-tenth of the previous number. (True / False) (1)