

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

DAY & DATE: TUESDAY – SEPTEMBER 23, 2025

MAXIMUM MARKS: 20

NAME: _____

TIME ALLOTTED: 30 MINUTES

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.

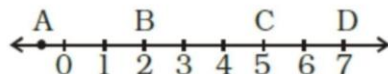
iv). Read the question paper carefully and then attempt it.

SECTION A

Q1. Which of the following is equal to 3^{-2} ? (1)
a. $\frac{1}{6}$ b. $\frac{1}{9}$ c. $-\frac{1}{9}$ d. $\frac{1}{3}$

Q2. In a pie chart, a sector representing 90° corresponds to what fraction of the whole? (1)
a. $\frac{1}{2}$ b. $\frac{1}{3}$ c. $\frac{1}{4}$ d. $\frac{1}{6}$

Q3. Which letter best represents the location of $\sqrt{25}$ on a number line? (1)



a. A b. B c. C d. D

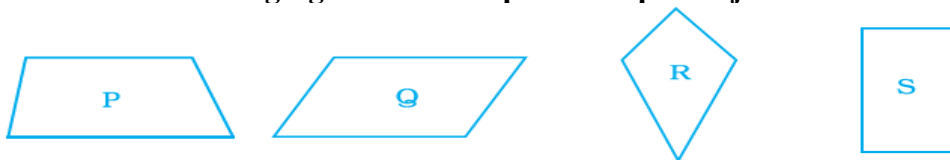
Q4. If $x = 2$, which expression gives the greatest value? (1)
a. $2x$ b. $x+5$ c. x^2+2 d. $3x - 1$

Q5. A rational number added to its reciprocal is 2. Which of the following can it be? (1)
a. 0 b. 1 c. -2 d. $\frac{1}{2}$

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 $1+3+5+7+9+11+13+15+17+19+21+23+25$ is a: (1)
a. Prime Number b. Negative Number c. Perfect Square d. Even 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. Which of the following is a binomial? (1)
 a. $7(a) + a$ b. $6a + 7b + 2c$ c. $4a \times 3b$ d. $6(a^2 + b)$
- Q10. If PQRS is a parallelogram, then $\angle P - \angle R$ is equal to (1)
 a. 60° b. 90° c. 80° d. 0°
- Q11. **Assertion:** The product of two monomials is a monomial. (1)
Reason: Only like terms can be multiplied.
 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:** The multiplicative inverse of 10^{10} is 10^{-10} (1)
Reason: The multiplicative inverse of a number is defined as a number which when multiplied by the original number gives the product as 1.
 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 even number, then the next even 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 31^2 and 32^2 (1)
- Q18. For a fixed base, if the exponent decreases by 1, then the number becomes one-tenth of the previous number. (True / False) (1)
- Q19. The square of every natural number is always greater than the number itself. (True / False) (1)
- Q20. Three years ago, the age of boy was y years. His age 2 years ago was $(y - 2)$ years. (True / False) (1)