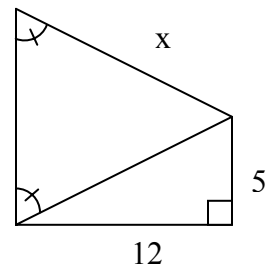


SAMPLE QUESTION PAPER

CLASS XI (CBSE)

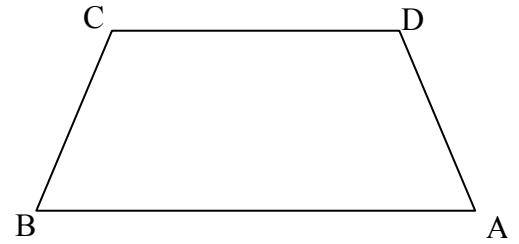
MATHEMATICS

- Solve the following system of equations $2x + 3y = 13$; $3x + 2y = 12$.
- Simplify : $\frac{x-2}{x^3-8} - \frac{2x+1}{2x^2-x-1}$.
- In an Arithmetic progression, 18th term is equal to twice the 10th term. Find the 2nd term of the progression.
- Find the value of x in the adjoining figure.
- If $3 \tan A = 2$, then find the value of $\frac{4 \sin A - 3 \cos A}{2 \sin A + 6 \cos A}$.
- If $\sin (A-B) = \frac{1}{2}$ and $\cos (A+B) = 0$, find A and B .
- A well whose diameter is 21 m has been dug 10m deep, Find the volume of the earth dug out.
- Numbers 50, 42, 39, 35, $2x+10$, $2x-8$, 12, 11, 8, 6 are written in descending order of magnitude and their median is 25, Find ' x ' and the two unknown data.
- Determine value(s) of p for which the quadratic equation $px^2 - 4x + 1 = 0$ has real roots.
- What must be subtracted from $x^4 - 6x^2 + 120$ so that the result is exactly divisible by $x^2 - x - 2$?
- The ratio of the radii of two cones is 5 : 3 and that of their heights is 4 : 7. Find the ratio of their volumes.
- If $f(x) = x^4 - 2x^3 + 3x^2 - ax + b$ is a polynomial such that when it is divided by $(x - 1)$ and $(x + 1)$, the remainders are 5 and 19 respectively. Determine the remainder when $f(x)$ is divided by $(x - 2)$.
- A man's age is four times his son's age. Five years ago he was five times his son's age. Find their ages.



SAMPLE QUESTION PAPER

14. Show that a line drawn parallel to the parallel sides of a trapezium divides the non – parallel sides proportionally.



15. Verify that $(2x + 3)$ is a factor of the polynomial $2x^2 + 5x + 3$.
16. From the following table find the Arithmetic mean.

CLASS INTERVAL	145-155	155-165	165-175	175-185	185-195
f	8	10	25	12	7

17. Find the numbers such that the mean proportional between them is 14 and third proportional to them is 112.

ALL THE BEST