

SATISH CHANDRA MEMORIAL SCHOOL

CLASS TEST

Class X

FM:12

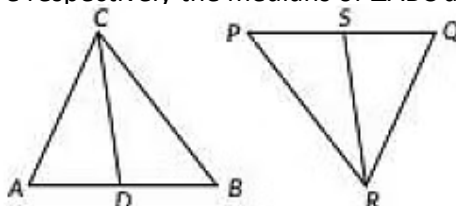
12/08/24

TRIANGLES

1. In the given figure, CD and RS are respectively the medians of $\triangle ABC$ and $\triangle PQR$. If $\triangle ABC \sim \triangle PQR$ then prove that:

- $\triangle PSR \sim \triangle ADC$
- $AD \times PR = AC \times PS$

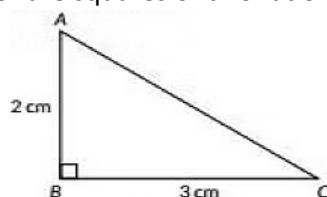
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2. **Assertion (A):** The perimeter of $\triangle ABC$ is a rational number.

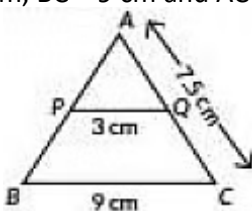
Reason (R): The sum of the squares of two rational numbers is always rational.

1



- Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
 - Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of the Assertion (A).
 - Assertion (A) is true, but Reason (R) is false.
 - Assertion (A) is false but Reason (R) is true.
3. In figure, $PQ \parallel BC$, $PQ = 3$ cm, $BC = 9$ cm and $AC = 7.5$ cm. Find the length of AQ .

2



4. In $\triangle ABC$, AD is the median to BC and in $\triangle PQR$, PM is the median to QR.

If $\frac{AB}{PQ} = \frac{BC}{QR} = \frac{AD}{PM}$, prove that $\triangle ABC \sim \triangle PQR$.

3

5. Bisector of $\angle B$ and $\angle C$ in $\triangle ABC$ meet each other at X. Line AX cuts the side BC in Y.

Prove that $\frac{AX}{XY} = \frac{AB+AC}{BC}$.

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