

SATISH CHANDRA MEMORIAL SCHOOL

CLASS TEST

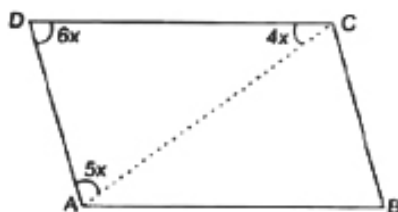
QUADRILATERALS

FM – 18

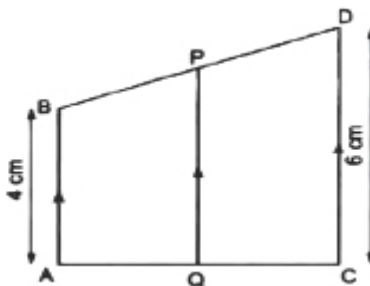
1. The quadrilateral formed by joining the mid-points of the sides of a quadrilateral ABCD taken in order is a square only if 1
 - a) ABCD is a rhombus
 - b) Diagonals of ABCD are equal
 - c) Diagonals of ABCD are equal and perpendicular
 - d) Diagonals of ABCD are perpendicular
2. A cone, a hemisphere and a cylinder stand on equal bases and have the same height. The ratio of their volumes is 1
 - a) 1:2:3
 - b) 2:1:3
 - c) 2:3:1
 - d) 3:2:1

Choose the correct option:

 - a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
 - b) Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).
 - c) Assertion (A) is true but Reason (R) is false.
 - d) Assertion (A) is false but Reason (R) is true.
3. **Assertion (A):** Diagonals AC and BD of a parallelogram ABCD intersect each other at point O. If $\angle BCA = 35^\circ$ and $\angle AOB = 65^\circ$, then $\angle DBC = 30^\circ$. 1
Reason (R): The adjacent angles of a parallelogram is supplementary.
4. **Assertion (A):** If a cone and a hemisphere have equal base and volume, then the ratio of their heights is 2 : 1. 1
Reason (R): Volume of a cylinder of height h and base radius r is $\pi r^2 h$. 1
5. In the adjoining figure, ABCD is a || gm. Find the angles A, B, C and D. 2



6. The diameter of a sphere is 42 cm. It is melted and drawn into a cylindrical wire of 28 cm diameter. Find the length of the wire. 2
7. In the adjacent figure, $AB \parallel QP \parallel CD$, Q is the mid-point of AC. If $AB = 4$ cm and $CD = 6$ cm then find PQ. 3



8. E and F are respectively the mid-points of the non-parallel sides AD and BC of a trapezium ABCD. Prove that $EF \parallel AB$ and $EF = \frac{1}{2}(AB+CD)$. 3
9. A metal marker has a triangular shaped metal. He welded another triangle on the mid-points of that metal, such that it appears like the following figure: 4

In the figure D, E and F are the mid-points of BC, AC and AB.

i) DE is equal to:

- a) AF b) $\frac{1}{2}AB$ c) BF d) All of these

ii) If $FE = FD$, then which of the following relation

- a) $AC = AB$ b) $\angle FED = \angle ECD$ c) $BC = AC$ d) $\angle CAB = \angle AFD$

iii) Which type of quadrilateral BDEF?

- a) Parallelogram b) Square c) rectangle d) Trapezium

iv) Identify the correct relation:

- a) $FD = \frac{1}{2}AB$ b) $AE + FD = AC$ c) $AB - DE = AC$ d) None of these

