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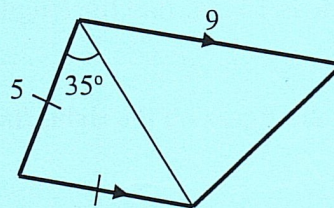
Class: 3E1

Date: 27th Aug

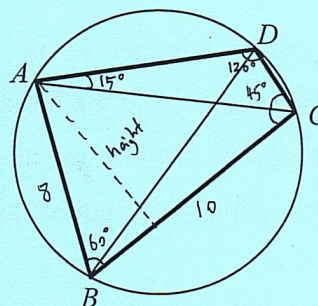
MA304.3.E1 – Sine and Cosine Rule Exercise

1. Given that the area of a rhombus is 60 m^2 and that each side is of length 12 m , find the angles of the corners of the rhombus.

2. Find the area of the quadrilateral shown on the right.

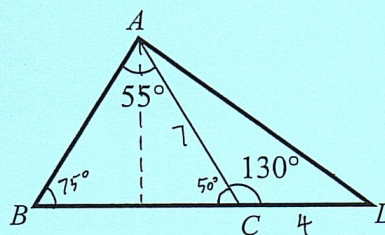


3. In a cyclic quadrilateral $ABCD$, $\angle ACD = 45^\circ$, $\angle ADC = 120^\circ$, $AB = 8 \text{ cm}$ and $BC = 10 \text{ cm}$.
- (a) Find the area of triangle ABC .
- (b) Using triangle BAD or BCD , find the length of BD .



4. In triangle ABC , $\angle A = 50^\circ$, $\angle B = 75^\circ$ and $AB = 6.3$. What is the length of the shortest side?

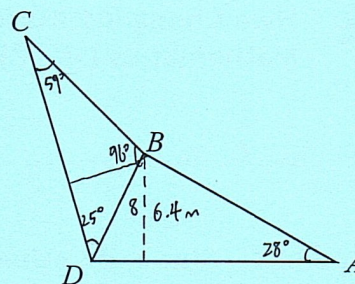
5. In the figure on the right, it is given that the length of AC is 7 cm and that of CD is 4 cm . Find
- (a) the area of triangle ABD ,
- (b) the distance of A from BC .



6. The figure on the right shows one side of a roof structure in which the base AD is horizontal and $BD = 8$ m, $\angle BAD = 28^\circ$, $\angle CDB = 25^\circ$ and $\angle CBD = 96^\circ$.

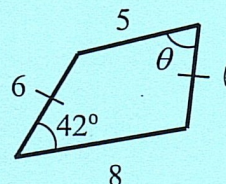
If B is at a height of 6.4 m above AD , find

- AD ,
- CD ,
- the distance of B from CD .



7. The angles A and B of triangle ABC are 48° and 53° respectively. Given that the shortest side is 14 cm, find the length of the shortest altitude of the triangle.

8. In the figure on the right, find the value of θ .



9. A pole, of height 10 m, stands on a slope which is inclined at 20° to the horizontal. A rope joins the top of the pole to a point on the slope which is 15 m down slope. Find the length of this rope.

