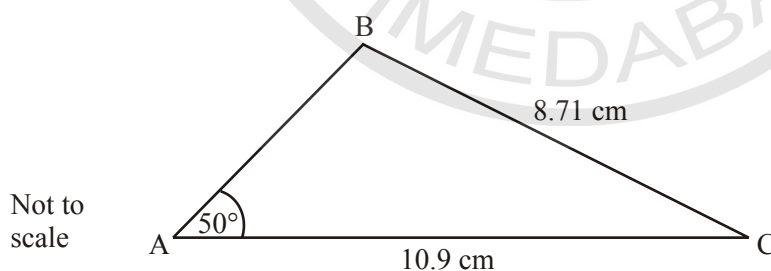


## Assignment : Area of triangle

Date \_\_\_\_\_

- In a triangle ABC,  $\hat{A} = 30^\circ$ ,  $AB = 6$  cm and  $AC = 3\sqrt{2}$  cm. Find the possible lengths of [BC].
- Triangle ABC has  $AB = 8$  cm,  $BC = 6$  cm and  $\hat{B} = 20^\circ$ . Find the smallest possible area of  $\triangle ABC$ .
- In the triangle ABC,  $\hat{A} = 30^\circ$ ,  $BC = 3$  and  $AB = 5$ . Find the two possible values of  $\hat{B}$ .
- The triangle ABC has an obtuse angle at B,  $BC = 10.2$ ,  $\hat{A} = x$  and  $\hat{B} = 2x$ .
  - Find AC, in terms of  $\cos x$ .
  - Given that the area of triangle ABC is  $52.02 \cos x$ , find angle  $\hat{C}$ .
- In triangle ABC,  $\hat{A} = 31^\circ$ ,  $AC = 3$  cm and  $BC = 5$  cm. Calculate the possible lengths of the side [AB].
- Consider triangle ABC with  $\hat{B} = 37.8^\circ$ ,  $AB = 8.75$  and  $BC = 6$ . Find AC.
- In triangle ABC,  $AB = 9$  cm,  $AC = 12$  cm, and  $\hat{B}$  is twice the size of  $\hat{C}$ . Find the cosine of  $\hat{C}$ .
- In the **obtuse-angled** triangle ABC,  $AC = 10.9$  cm,  $BC = 8.71$  cm and  $\hat{B} = 50^\circ$ .



Find the area of triangle ABC.

- In the triangle ABC,  $\hat{A} = 30^\circ$ ,  $a = 5$  and  $c = 7$ . Find the difference in area between the two possible triangles for ABC.
- Triangle ABC has  $\hat{C} = 42^\circ$ ,  $BC = 1.74$  cm, and area  $1.19 \text{ cm}^2$ .
  - Find AC.
  - Find AB.

## Answer of Assignment of Area of triangles

1. 2.20 cm.
2. 2.98 (cm<sup>2</sup>)
3.  $\hat{C} = 56.4^\circ$  or  $123.6^\circ$   
 $\hat{B} = 93.6^\circ$  or  $26.4^\circ$
4. (a)  $= 20.4 \cos x$   
(b)  $\hat{C} = 30^\circ$
5.  $= 5.82$  or  $2.75$
6. 4.22
7.  $\frac{2}{3}$
8. 18.9 (cm<sup>2</sup>)
9. 12.5 cm<sup>2</sup>
10. (a) 2.04 (cm)  
(b) 1.39 (cm)

