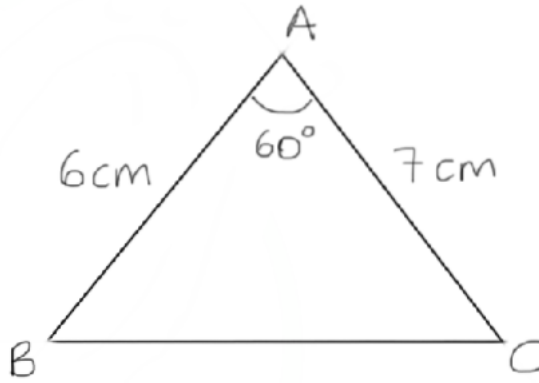


# COSINE RULE

CANSU OLCE

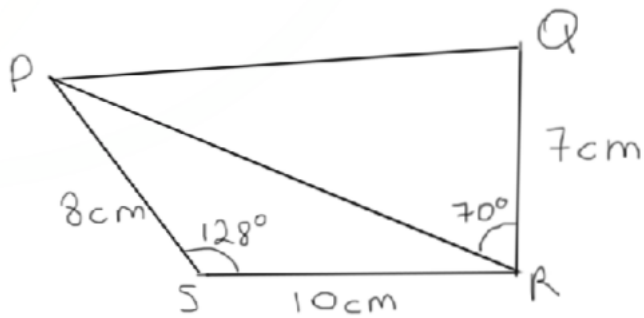
A STAR MATHS ([www.astarmaths.com.au](http://www.astarmaths.com.au))

1.



The diagram shows a triangle ABC. Calculate the length of BC.

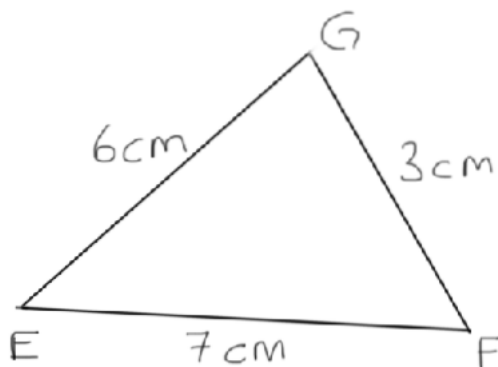
2.



The diagram shows two triangles, PQR and PRS. Calculate

- a) the length of PR
- b) the length of PQ

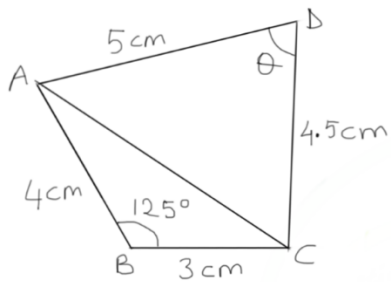
3.



The diagram shows a triangle EFG. Calculate  $\angle GEF$ ,  $\angle EFG$ ,  $\angle EGF$ .

4. Given KLM is a triangle with  $KL=5$  cm,  $LM=7$  cm and  $KM=8$  cm. Calculate the biggest angle.

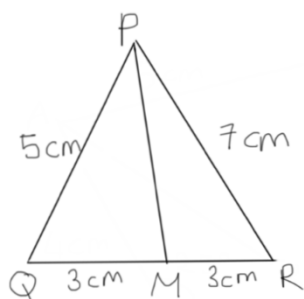
5.



The diagram shows two triangles,  $ABC$  and  $ACD$ . Calculate

- the length of  $AC$
- the value of  $\theta$  in degrees and minutes.

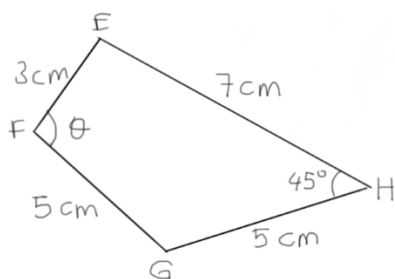
6.



In the diagram,  $QMR$  is a straight line. Calculate

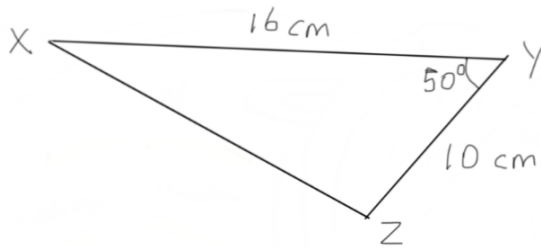
- $\angle PRM$
- the length of  $PM$ .

7.



The diagram shows a quadrilateral  $EFGH$ . Calculate the value of  $\theta$ .

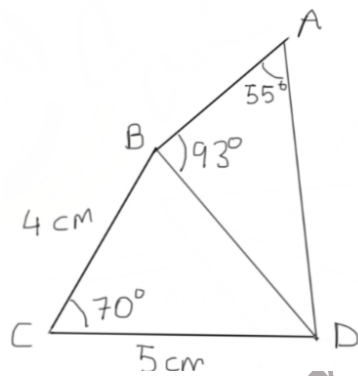
8.



The diagram shows a triangle XYZ. Calculate

- the length of XZ.
- $\angle YXZ$ .

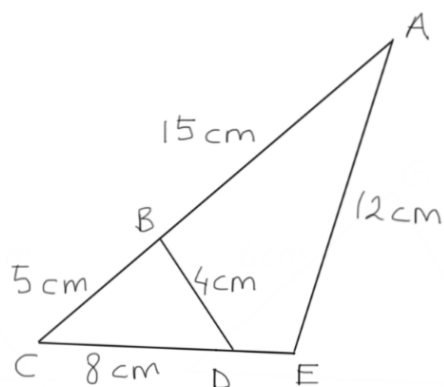
9.



The diagram shows two triangles, ABD and BCD. Calculate

- the length of BD.
- the length of AB.

10.



In the diagram, ABC and CDE are straight lines. Calculate

- $\angle BCD$
- $\angle AED$

ANSWER KEY

1. 6.557 cm
2. a)16.20 cm b)15.29cm
3.  $\angle GEF = 25^{\circ}13'$   
 $\angle EFG = 58^{\circ}25'$   
 $\angle EGF = 96^{\circ}22'$
4.  $81^{\circ}47'$
5. a) 6.226 cm b)  $81^{\circ}43'$
6. a)  $44^{\circ}25'$  b)5.292 cm
7.  $71^{\circ}33'$
8. a) 12.26 cm b)  $38^{\circ}40'$
9. a) 5.227 cm b)3.381 cm
10. a)  $24^{\circ}9'$  b)  $137^{\circ}1'$

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