

TRIGONOMETRY – WORKSHEET

COURSE/LEVEL

NSW Secondary High School Year 9 Advanced Mathematics.

TOPIC

Trigonometric Ratios, Right-angled triangles and Trigonometry. (Syllabus Ref: M3 (i), (ii))

1. Evaluate the following to one decimal place:

(i) $\cos 28^\circ$

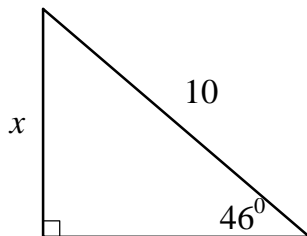
(iii) $15 \times \sin 49^\circ$

(iii) $\frac{\sin 102^\circ}{\cos 102^\circ}$

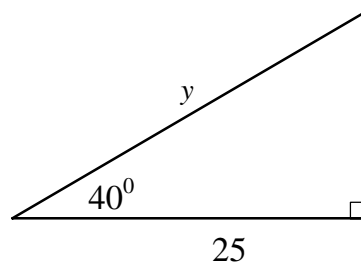
(iv) $\sin^2 25^\circ + \cos^2 25^\circ$

2. Find the value of each pronumeral, correct to one decimal place.

(i)

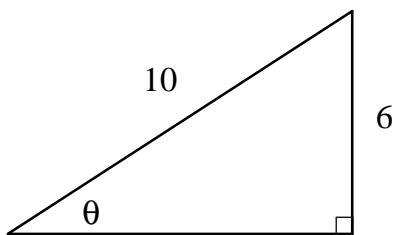


(ii)

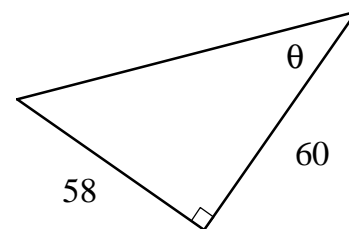


3. Find the value of θ , correct to the nearest minute in each of these triangles.

(i)

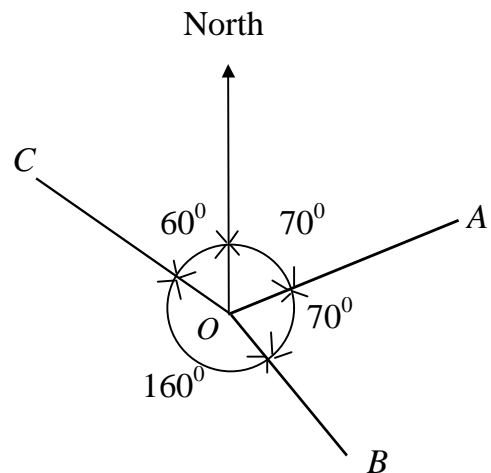


(ii)

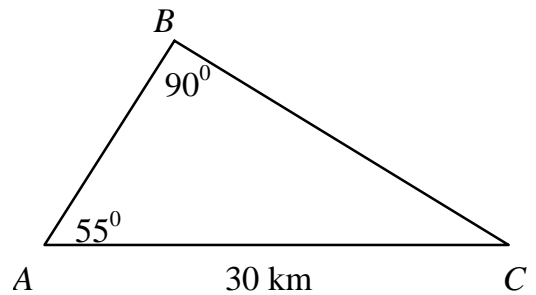


4. A true bearing is an angle measured clockwise from North and is written using three figures.

Write down the true bearings of points A , B and C from O .



5. Three towns, A , B and C , are situated as shown in the diagram. C is 30 km due west of A .



- (i) What is the bearing of C from B ?
- (ii) How far is A from C ?
(Answer to the nearest metre.)
6. From a clifftop 300 metres above the ocean, the angle of depression of a rowboat in the water is 8° . Calculate, to the nearest metre, the horizontal distance from the boat to the base of the cliff.
7. Holly is in a plane which is flying horizontally in a straight line from a point O in the direction 056° . After a while Holly is at a point A , which is 65 km from O .
- (i) Draw a diagram showing all the above information.
- (ii) Calculate how far west Holly is from her starting point.
8. The bearings from a point P of two points A and B are 34° and 124° and their distances from P are 230 m and 760 m respectively. Find the bearing of B from A .
9. Kevin pedalled his pushbike along a road for 4km in the direction $S65^\circ E$. He then changed course to $N25^\circ E$ and pedalled a further 3km. Find the distance and bearing from where he started.