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))

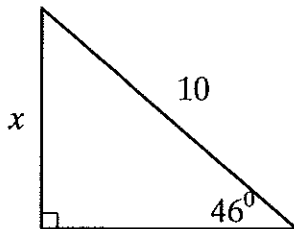1. Evaluate the following to one decimal place:

(i) $\cos 28°$

(ii) $15 \times \sin 49°$

(iii) $\dfrac{\sin 102°}{\cos 102°}$
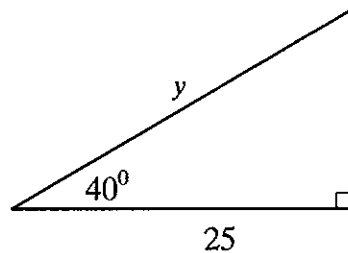
(iv) $\sin^2 25° + \cos^2 25°$

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

(i)

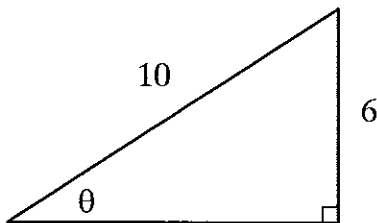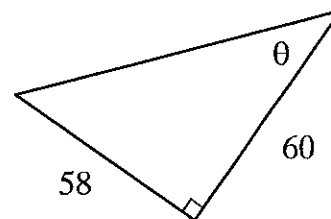

(ii)

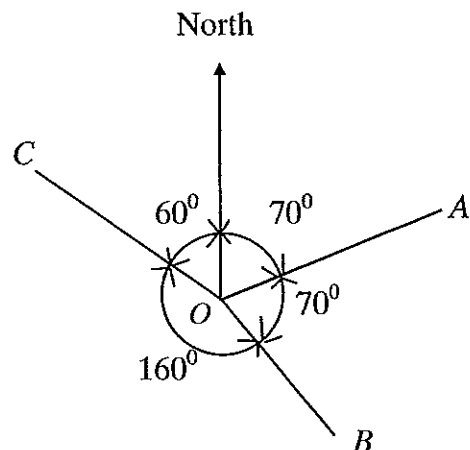3.   Find the value of θ, correct to the nearest minute in each of these triangles.

(i)

(ii)

4.   A true bearing is an angle measured clockwise from North and is written using three figures.
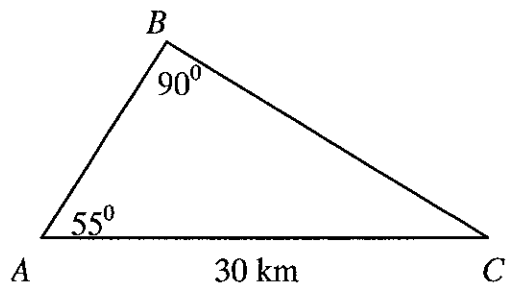
Write down the true bearings of points A, B and C from O.

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

    (i) What is the bearing of *C* from *B*?

    (ii) How far is *B* from *C*?
    (Answer to the nearest metre.)

B

90^0

55^0

A   30 km   *C*

6. From a clifftop 300 metres above the ocean, the angle of depression of a rowboat in the water is 8^0. 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 056^0. 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 east Holly is from her starting point.

8. The bearings from a point *P* of two points *A* and *B* are 34^0 and 124^0 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 115^0T He then changed course to 025^0T and pedalled a further 3km. Find the distance and bearing from where he started.

ANSWERS TO MATHEMATICS PLUS 2002
TRIGONOMETRY WORKSHEET

1 i	0.9	ii	11.3	iii	-4.7	iv	1	2 i	7.2 units
ii	32.6	3 i	$36^0 52'$	ii	$44^0 2'$	4 i	A 070^0 B 140^0 C 300^0	5 i	125^0 T
ii	24575 m	6.	2135 m	7 i	Check	ii	53.9 km	8	73^0; 141^0
9	078^0T	9	5 km						

- **Updated 03/06**