Name: _____

1. Find   (a) the angle θ and ...

   (b) the area of the triangle

6.5 cm

θ

6 cm

2. Find the angle θ

10m   8m

51⁰   θ

3. Simplify   (a) $\dfrac{Tan\ x}{\sqrt{1 - Cos^2 x}}$
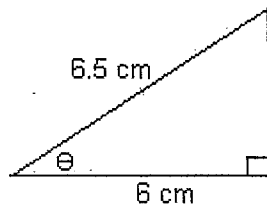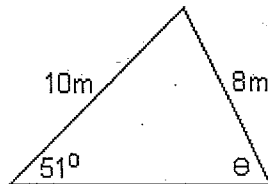
   (b) Cot x . Cos(90-x)

4. A ship sails due East for 20 miles, then sails 30 miles at bearing 155°

Find:

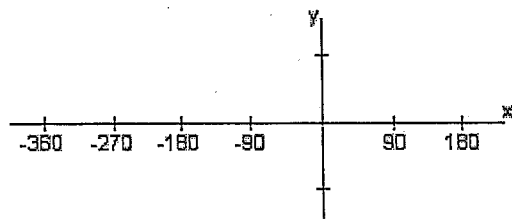(a) How far the ship is from its original position, P.

(b) Its final bearing from P.

5. Give <u>exact</u> values for the following:-

(a) Tan 30°

(b) Sin 300°

(c) Cos (-135°)

6. (a) Sketch the graph of $y = Cos\ x$

   for $-360° < x \leq 180°$

   (b) (Refer to your graph to answer this question.)
   How many solutions does $Cos\ x = -1$ have

   for the domain $-360° < x \leq 180°$

7. (a) Convert 330° to Radians
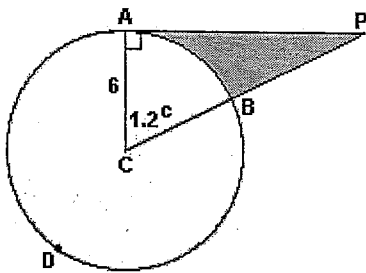
   (b) Convert 2.15 radians to degrees.

8. (a) Solve for $0° \leq x < 360°$: $Cos\ x = \frac{1}{3}$

   (b) Solve for $0 \leq x < 2\pi$: $2\ Tan\ x + 5 = 0$

9. In the diagram below:-

AC = CB = 6cm   and   ∠CAP = 90°

Find (a) the arc length AB

(b) the arc length ADB

(c) the length AP
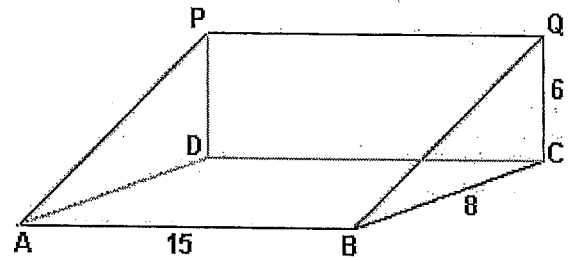
(d) the area of the APC

(e) the area of the Sector CAB

(f) the Shaded area.

10. The following diagram is a triangular prism with:-

AB = 15m ; BC = 8m ; QC = 6m and ∠QCB = 90°

Find (a) the length QB

(b) the length BD

(c) the length DQ

(d) the angle ∠QDC

(e) the angle ∠QDB