New Higher Homework 1

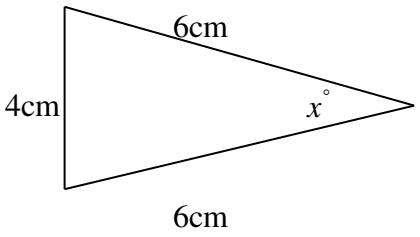
(N5 Revision)

Section 1:Trigonometry

1. Sketch the graph of each of these functions for $0 \le x \le 360$. Show clearly the scale on each axis.

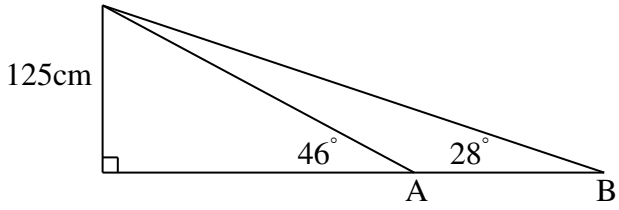
   (a) $y = \sin x^\circ$ (b) $y = 3\cos 2x^\circ$

2. (a)



Calculate x, correct to 1 decimal place.

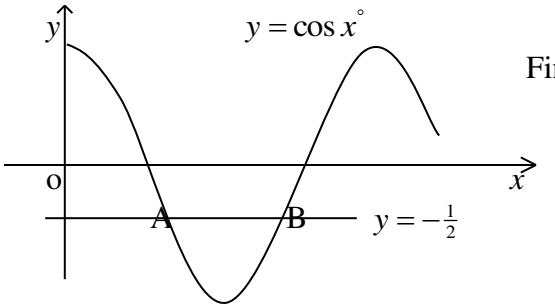
(b)



Calculate the length of AB.

3. $\cos x^\circ = \frac{4}{5}$ $(0 < x < 90)$. Write down the **exact** value of (a) $\sin x^\circ$ (b) $\tan x^\circ$

4.



Find algebraically the coordinates of A and B.

Section 2: Straight Lines

1. Find the equation of each of these straight lines:

   (a) Gradient 4, passing through (0,-2).
   (b) Passing through (1,1) and (7,13).

2. Find the gradient and y-intercept of each of these straight lines:

   (a) $y = 3x - 5$ (b) $x + y = 5$ (c) $2x + 3y = 8$
   (d) $3x - 4y + 5 = 0$ (e) $-4x + y = -3$