New Higher Homework 2

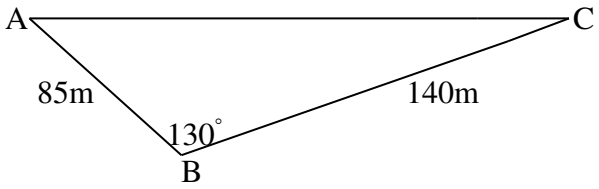
(N5 Revision)

1. $f(x) = 5 - 3x$. Find the value of $f(a) + f(-a)$.

2. Solve these equations $(0 \le x \le 360)$:

   (a) $7\tan x^\circ - 4 = 0$ (b) $4\sin^2 x^\circ - 1 = 0$

3. Find the length of AC, correct to 3 significant figures.



4. Find the area of the triangle in Q3, above .

5. $K = \sqrt{\frac{m-n}{m+n}}$. Change the subject of this formula to *m*.

6. Solve each of these quadratic equations:

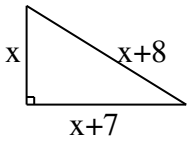
   (a) $x^2 - x = 12$ (b) $6x^2 - 5 = 7x$ (c) $\frac{1}{8}x^2 = -\frac{x}{4} + 1$

2. Find the roots of these equations, correct to 3 significant figures.

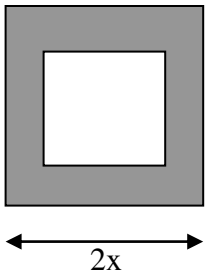
   (a) $x^2 - 2x - 5 = 0$ (b) $2x^2 - x - 2 = 0$

3. In each of these diagrams find the value of x.

   (a)



   (c)



Outer square has side 2x.
Inner square has side (x+1).
Shaded area 78 sq units.