1. Use your calculator to work out $\sqrt{\dfrac{\sin 25° + \sin 40°}{\cos 25° - \cos 40°}}$

(a) Write down all the figures on your calculator display.

(on calculator press $\sqrt{\ }$ and a/b) then type $\sqrt{\dfrac{\sin 25 + \sin 40}{\cos 25 - \cos 40}}$

$= 2.75603957$

2.75603957

2.75603957 ✓✓

(2)

(b) Write your answer to part (a) correct to 2 decimal places.

2.75603957

$= 2.76$ (2.d.p)

2.76 ✓

(1)

(Total for Question is 3 marks)

2. Work out $\sqrt{\dfrac{2.5 \times \sin 43°}{8.2^2 - 50.5}}$

Give your answer correct to 3 significant figures.

$\sqrt{\dfrac{2.5 \times \sin 43}{8.2^2 - 50.5}} = \sqrt{\dfrac{2.5 \times \sin 43}{16.74}}$ (1)

$= 0.319141985\ldots \approx 0.319$ (3 s.f.)

(1)

0.319

(Total for Question is 2 marks)

F O I L ← Last
Front Outside Inside

$(x+5)(x-9) = x^2 - 9x + 5x - 45$
$= x^2 - 4x - 45$

(2)

$x^2 - 4x - 45$

$9x^2 + 6x = 3x(3x+2)$

(2)

$3x(3x+2)$

3. (a) Use your calculator to work out $\dfrac{29^2 - 4.6}{\sqrt{35 - 1.9^3}}$

Write down all the figures on your calculator display.

157.668255 (2)

(2)

(b) Write your answer to part (a) correct to 4 significant figures.

157.6 6 8255 ← round up since ≥ 5
= 157.7 (4sf)

157.7 (1)

(1)