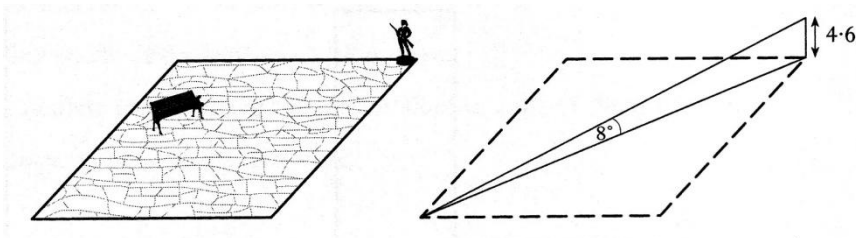


- Label Diagrams
- Does answer make sense!

Trigonometry - S^OHC^AHT^OA Homework 2

- Presentation
- Units

5. A statue stands at the corner of a square courtyard.



The statue is 4.6 metres high.

The angle of elevation from the opposite corner of the courtyard to the top of the statue is 8° .

- (a) Find the distance from the base of the statue to the opposite corner of the courtyard. 2 marks
- (b) Find the length of the side of the courtyard to the nearest whole number. 2 marks

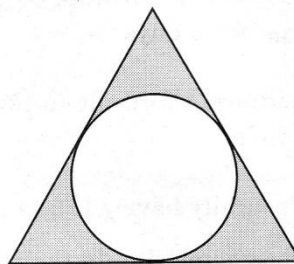
6. The diagram shows the design of an earring.

The earring consists of a circle inside an equilateral triangle.

The sides of the triangle are tangents to the circle.

The radius of the circle is 8 mm

The distance from the centre of the circle to **each** vertex of the triangle is 17mm.



Calculate the perimeter of the triangle.

4 marks

Total : 17 marks

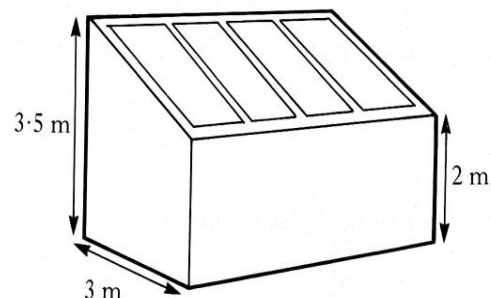
- Label Diagrams
- Does answer make sense!

Trigonometry - S^OHC^AHT^OA Homework 2

- Presentation
- Units

7. The Scott family want to build a conservatory as shown in the diagram.

The conservatory is to be 3 metres wide.
The height of the conservatory at the lower end is to be 2 metres and at the higher end 3.5 metres.



To obtain planning permission, the roof must slope at an angle of (25 ± 2) degrees to the horizontal.

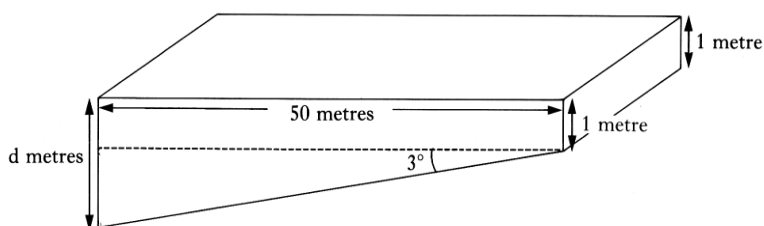
Should planning permission be granted.

Justify your answer.

4 marks

8. The diagram shows the design of a swimming pool 50 metres in length.

The pool is 1 metre deep at one end and its base slopes downwards at an angle of 3° to the horizontal.



Calculate the depth, d metres, of the other end of the pool, giving your answer to 2 significant figures.

Do not use a scale drawing.

5 marks

Total : 17 marks