

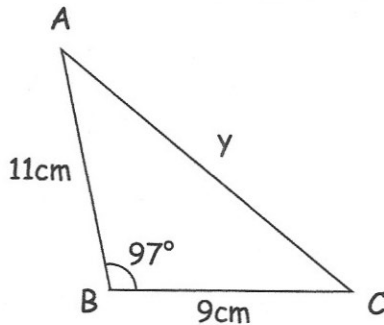


Natalie is asked by her teacher to write 203,450 in standard form.

Natalie writes  $20.3 \times 10^4$

↓  
needs to be less than 10  
(and greater than or equal to 1).

Explain why Natalie is wrong.



Calculate the length of AC.

$$y^2 = 11^2 + 9^2 - 2 \times 11 \times 9 \times \cos 97$$

$$y^2 = 226.13013$$

$$y = 15.04 \text{ cm}$$

A cube has side length 9cm.

A sphere has radius  $r$ .

$$9 \times 9 \times 9 = 729$$

The cube and sphere have the same volume.

Calculate  $r$ .

$$\frac{4}{3} \pi r^3 = 729$$

$$\pi r^3 = 546.75$$

$$r^3 = 174.035 \dots$$

$$r = 5.583 \text{ cm}$$

Here are the fifth and sixth terms of a Fibonacci-type sequence.

7 18 9 17 26

Find the first term of the sequence.

7

Here are the first and third terms of a different Fibonacci-type sequence

d ed e zed zed se-2d

Work out an expression in terms of  $d$  and  $e$  for the sixth term

$5e - 2d$