

**28th July**

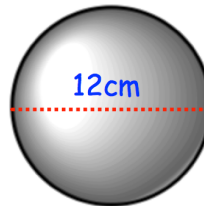
Corbettmaths

Here are the first 5 terms of a quadratic sequence

24 30 38 48 60

Find an expression, in terms of  $n$ , for the  $n$ th term of this quadratic sequence

A solid sphere has a diameter of 12cm.  
The sphere is made from glass.  
The density of the glass is 2.97g/cm<sup>3</sup>  
Find the mass of the glass sphere.



Solve

$$x^2 + 9 > 10x$$

A circle has equation  $x^2 + y^2 = 196$

Work out the length of the diameter.

A group of scientists want to estimate the number of eels in a lake.  
They catch and ring 400 eels.  
They return the 400 eels to the lake.  
They then catch 700 eels.  
Of these, 16 are ringed.

Estimate the number of eels in the lake.