



The equation of a circle is  
 $x^2 + y^2 = 49$

Find the circumference of the circle.  
Give your answer to 2 decimal places.

Work out an expression for the  $n$ th  
term of this quadratic sequence

3    14    31    54    ...

Give your answer in the form  
 $an^2 + bn + c$

Show the equation  $2x^3 + 9x = 40$   
has a solution between 2 and 3.

Show that  $2x^3 + 9x = 40$  can be  
arranged to give

$$x = \sqrt[3]{20 - \frac{9}{2}x}$$

Starting with  $x_0 = 2$ , use the  
iteration formula

$$x_{n+1} = \sqrt[3]{20 - \frac{9}{2}x_n}$$

to find an estimate to the solution to  
 $2x^3 + 9x = 40$