



A straight line passes through the points  $(m, n)$  and  $(p, q)$  where

$$p = m + 8$$

$$n = q - 10$$

Find the gradient of the line

Show the equation

$$x^2 + 10x = 35$$

has a solution between 2 and 3.

Show the equation

$$x^2 + 10x = 35$$

can be rearranged to give

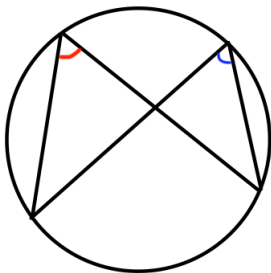
$$x = \frac{7}{2} - \frac{x^2}{10}$$

Starting with  $x_0 = 2$

use the iteration formula

$$x_{n+1} = \frac{7}{2} - \frac{x_n^2}{10}$$

four times to find an estimate for the solution of  $x^2 + 10x = 35$



Prove the angles in the same segment are equal.