

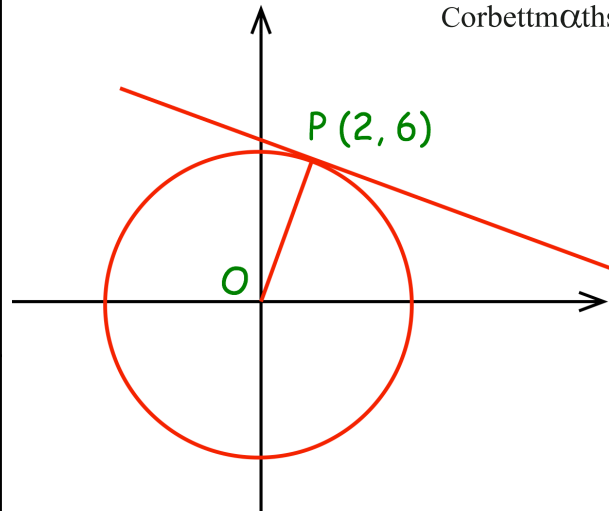
**15th February**



Corbettmaths

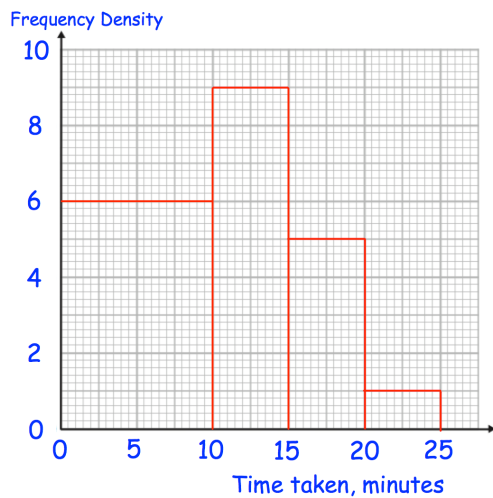
The diagram shows the circle  $x^2 + y^2 = 40$  with a tangent at the point (2, 6)

Find the gradient of the line OP



Find the gradient of the tangent

Find the equation of the tangent



The histogram shows information about the time taken to travel to school by students.

Two students are chosen at random.

Work out the probability that both students take more than 5 minutes to travel to school.

Prove that if two consecutive integers are squared, that the sum always gives a remainder of 1 when divided by 4.