

12th September

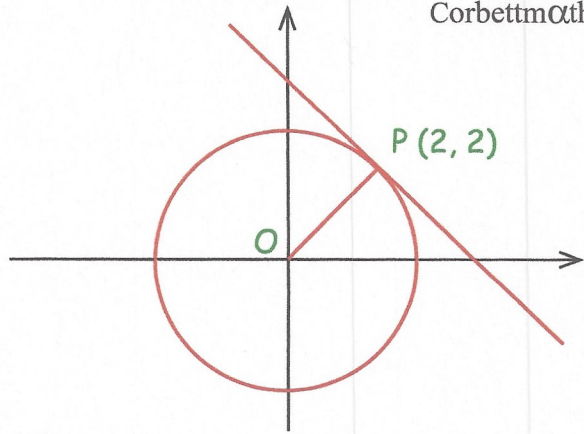


Corbettmaths

The diagram shows the circle $x^2 + y^2 = 8$ with a tangent at the point (2, 2)

Find the gradient of the line OP.

1



Find the gradient of the tangent

-1

Find the equation of the tangent

$$y = -x + 4$$

The length of the base of a triangle and its perpendicular height are:

base: $\frac{x+5}{10}$ cm

height: $\frac{x-1}{4}$ cm

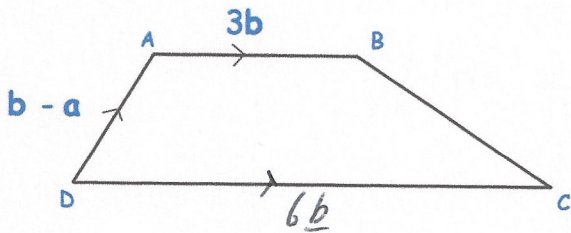
$$A = \frac{1}{2}bh$$

$$\frac{1}{2} \times \frac{x+5}{10} \times \frac{x-1}{4}$$

Find an expression for the area of the triangle.

$$\frac{(x+5)(x-1)}{80}$$

ABCD is a trapezium



\overrightarrow{DC}

$6b$

AB and DC are parallel.
DC = 2AB

Write down these vectors in terms of a and b

$$\begin{aligned} \overrightarrow{BC} &= \overrightarrow{BA} + \overrightarrow{AD} + \overrightarrow{DC} \\ &= -3b + (b-a) + 6b \\ &= 2b + a \end{aligned}$$