

24th November



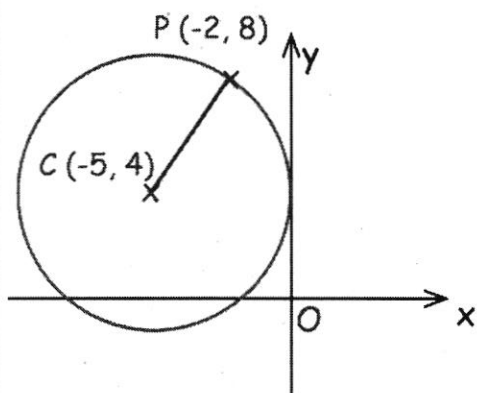
Corbettmaths

Write $\sqrt[3]{w^{-13} \times w^{-2}}$ as an integer power of w

$$= (w^{-15})^{1/3}$$

$$= \underline{w^{-5}}$$

The diagram shows the circle, centre C , with equation $(x + 5)^2 + (y - 4)^2 = 25$ with a tangent at the point $(-2, 8)$



Find the equation of the tangent

$$m_{CP} = \frac{4}{3} \quad m_{\perp} = -\frac{3}{4}$$

$$\text{Tgt: } y - 8 = -\frac{3}{4}(x + 2)$$

$$\underline{y = -\frac{3}{4}x + \frac{13}{2}}$$

Solve $2\tan\theta = 3$ for $0^\circ \leq \theta \leq 360^\circ$

$$\tan\theta = \frac{3}{2}$$

$$\Rightarrow \underline{\theta = 56.3^\circ, 236.3^\circ}$$

A pizza parlour sells 12 different toppings. Beth orders a pizza with 4 different toppings.

How many different pizzas can she choose from?

$$\frac{12 \times 11 \times 10 \times 9}{4 \times 3 \times 2 \times 1} = \underline{495} \quad [{}^{12}C_4]$$