

10th April



Corbettmaths

Solve the simultaneous equations

$$\begin{array}{l} 3x + 11y = 100 \\ 6x + 28 = 2y \end{array} \quad \left. \vphantom{\begin{array}{l} 3x + 11y = 100 \\ 6x + 28 = 2y \end{array}} \right\} \times 2$$

$$6x + 22y = 200$$

$$6x - 2y = -28$$

$$\hline 24y = 228$$

$$y = \frac{19}{2}$$

$$6x + 28 = 19$$

$$6x = -9$$

$$x = -\frac{3}{2}$$

$$y = 3x^5 - 2x - 1$$

Work out  $\frac{dy}{dx}$ 

$$\frac{dy}{dx} = 15x^4 - 2$$

Circle 1 has an equation of  
 $(x - 6)^2 + (y - 1)^2 = 9$ Circle 2 has an equation of  
 $(x + 3)^2 + (y - 7)^2 = 144$ Calculate the distance between the  
centres of Circle 1 and Circle 2

$$(6, 1) \quad (-3, 7)$$

$$\sqrt{9^2 + 6^2} = 3\sqrt{13}$$

Sketch  $y = \tan x$  with  $-180^\circ \leq x \leq 180^\circ$ 