

5th July

Higher Plus 5-a-day



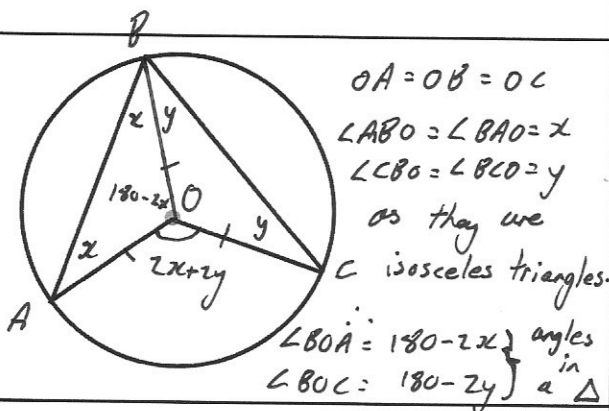
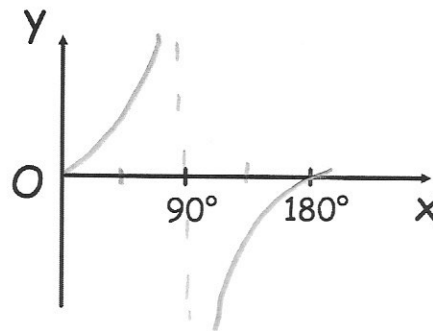
Corbettmaths

Factorise fully

$$98 - 72x^2 \quad 2(49 - 36x^2)$$

$$2(7 - 6x)(7 + 6x)$$

Sketch  $y = \tan x$  for  $0^\circ \leq x \leq 180^\circ$



Prove that the angle at the centre is twice the angle at the circumference.

$$\angle BOA + \angle BOC + \angle AOC = 360 \text{ angles at a point.}$$

$$\therefore \angle AOC = 2x + 2y$$

$$\text{So } \angle AOC = 2 \times \angle ABC$$

A and B are similar cuboids

volume of A: volume of B = 27 : 125

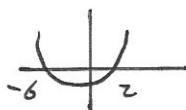
Work out  
surface area of B: surface area of A

$$\sqrt[3]{27} = 3 \quad \sqrt[3]{125} = 5$$

	A	B
sides:	3	5
Area:	9	25

$$\underline{\underline{25 : 9}}$$

Solve  $x^2 + 4x - 12 > 0$



$$x < -6 \text{ or } x > 2$$

$$(x+6)(x-2)$$

$$x = -6 \text{ or } x = 2$$