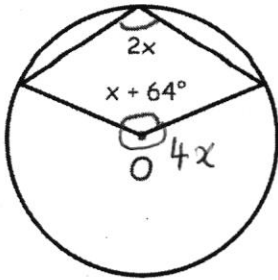


6th September



Corbettmaths

Work out the value of  $x$ 

$$4x + x + 64 = 360$$

$$5x = 296$$

$$x = 59.2$$

$$f(x) = 9 - 2x$$

$$g(x) = 1 - x^2$$

Find  $gff(x)$ 

$$gff(x) = gf(9 - 2x)$$

$$= g(9 - 2(9 - 2x))$$

$$= g(4x - 9)$$

$$= 1 - (4x - 9)^2$$

$$= 1 - (16x^2 - 72x + 81)$$

$$= -16x^2 + 72x - 80$$

Work out the coefficient of  $x^3$   
in the expansion of  $(1 + 4x)^5$ 

$$\text{Term on } x^3 \text{ is } 10 \times 1^2 \times (4x)^3$$

$$= 640x^3$$

↑

$$10\cos x + 3\sin x = 0$$

where  $0^\circ < x < 360^\circ$ Work out the size of angle  $x$ .

$$\Rightarrow 3\sin x = -10\cos x$$

$$\Rightarrow \tan x = -\frac{10}{3}$$

$$\Rightarrow x = \underline{106.7^\circ, 286.7^\circ}$$