

**5th April**

Corbettmaths

The straight line joining  $(-4, 24)$  and  $(a, 3)$  has a length of  $7\sqrt{10}$

Find the two possible values of  $a$ .

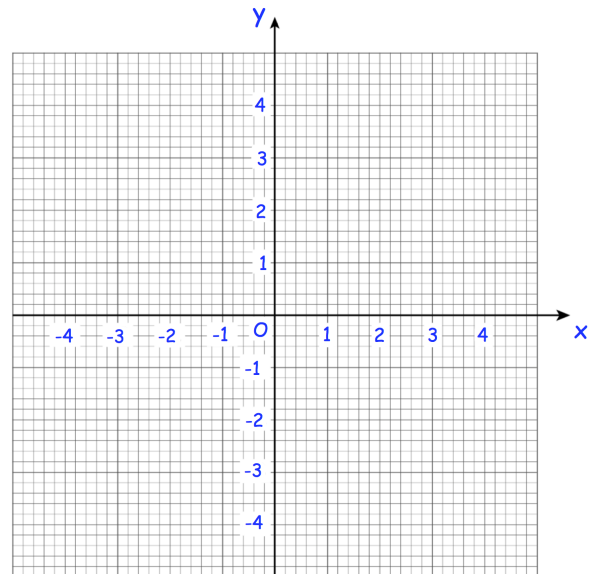
A function  $f(x)$  is defined as

$$f(x) = x \quad -4 \leq x < 0$$

$$= x^2 \quad 0 \leq x < 2$$

$$= 6 - x \quad 2 \leq x \leq 4$$

Draw the graph of  $y = f(x)$  and state its range.



Solve

$$2\sin^2 x + 1 = 5\cos x$$

for  $0^\circ < x < 360^\circ$