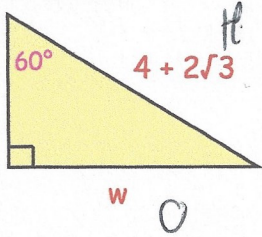


25th August



Corbettmaths

Find the exact length of the side labelled w

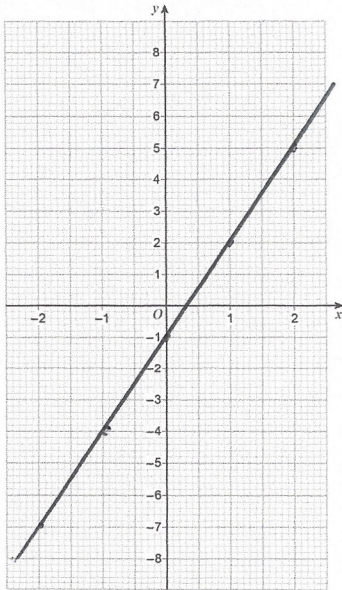


$50H$

$$\sin(60) \times (4 + 2\sqrt{3})$$

$$\frac{\sqrt{3}}{2} \times (4 + 2\sqrt{3})$$

$$\underline{2\sqrt{3} + 3}$$



$$f(x) = \frac{x + 1}{3}$$

Draw

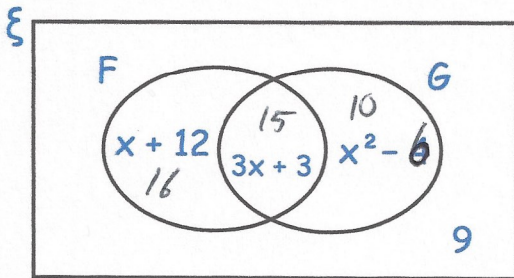
$$y = f^{-1}(x)$$

$$y = \frac{x + 1}{3}$$

$$3y = x + 1$$

$$3y - 1 = x$$

$$f^{-1}(x) = 3x - 1$$



The Venn diagram shows information about the languages studied by 50 students.

$$x + 12 + 3x + 3 + x^2 - 6 + 9 = 50$$

$\xi = 50$ students

F = studies French

G = studies German

$$x^2 + 4x + 18 = 50$$

$$x^2 + 4x - 32 = 0$$

$$(x + 8)(x - 4) = 0$$

$$x = -8 \times \quad x = 4 \checkmark$$

Find how many students study both languages

15

A student is chosen at random.

They study German. 25

Work out the probability they also study French

$$\frac{15}{25} = \frac{3}{5}$$