

5th October



Corbettmaths

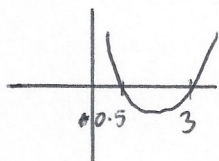
A circle has a radius of 3 and centre (0, 0)

Write down the equation of the circle.

$$x^2 + y^2 = 9$$

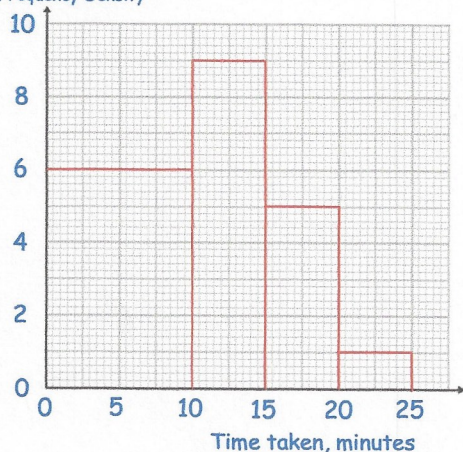
Solve  $2x^2 - 7x + 3 < 0$ 

$$(2x - 1)(x - 3)$$



$$0.5 < x < 3$$

Frequency Density



135

Two students are chosen at random.

Work out the probability that both students take less than 5 minutes to travel to school.

$$\frac{30}{135} \times \frac{29}{134}$$

$$\frac{29}{603}$$

The histogram shows information about the time taken to travel to school by students.

Prove that if two consecutive integers are squared, that the sum always gives a remainder of 1 when divided by 4.

$$\begin{aligned} &(2n)^2 + (2n+1)^2 \\ &4n^2 + 4n^2 + 4n + 1 \\ &8n^2 + 4n + 1 \end{aligned}$$

$$4(2n^2 + n) + 1$$

$$\begin{aligned} &(2n+1)^2 + (2n+2)^2 \\ &4n^2 + 4n + 1 + 4n^2 + 8n + 4 \\ &8n^2 + 12n + 5 \\ &4(2n^2 + 3n + 1) + 1 \end{aligned}$$