24th September **Higher 5-a-day**

Corbettmaths

Simplify

$\sqrt{245}$

$\sqrt{49} \times \sqrt{5}$

$7\sqrt{5}$

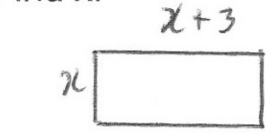
A field is 3 metres longer than wide.

The width of the field is x metres.

The area of the field is 20m²

3.217m

Find x.



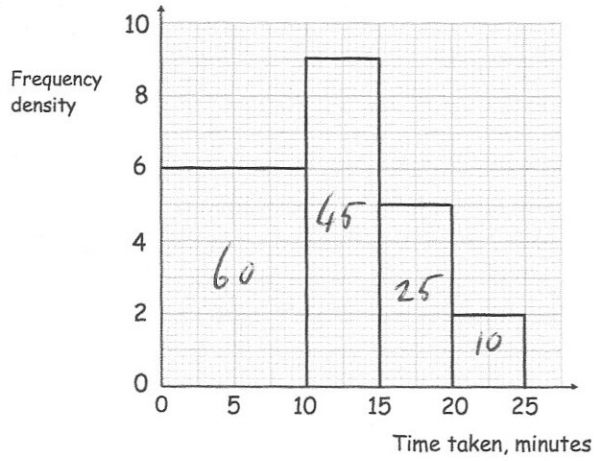
$x(x+3) = 20$

$x^2 + 3x - 20 = 0$

$a = 1 \quad b = 3 \quad c = -20$

$x = \frac{-3 \pm \sqrt{9-(-80)}}{2}$

$x = 3.217$ m or -6.217 X



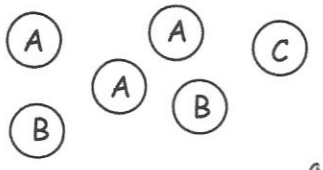
The histogram shows information about the time taken to travel to school by students.

Complete the frequency table

Time taken, minutes	Frequency
$0 < t \leq 10$	60
$10 < t \leq 15$	45
$15 < t \leq 20$	25
$20 < t \leq 25$	10

Work out an estimate of the number of students that take under 5 minutes to travel to school.

30



$P(AA) = \frac{3}{6} \times \frac{3}{6} = \frac{9}{36}$

$P(BB) = \frac{2}{6} \times \frac{1}{6} = \frac{4}{36}$

A game is played where a disc is removed, the letter noted and it is **replaced**. Then another disc is removed and the letter noted.

Calculate the probability that the two discs removed have the **same** letter

$P(CC) = \frac{1}{6} \times \frac{1}{6} = \frac{1}{36}$

$\frac{14}{36} = \frac{7}{18}$