27th February **Higher 5-a-day**

Corbettmaths

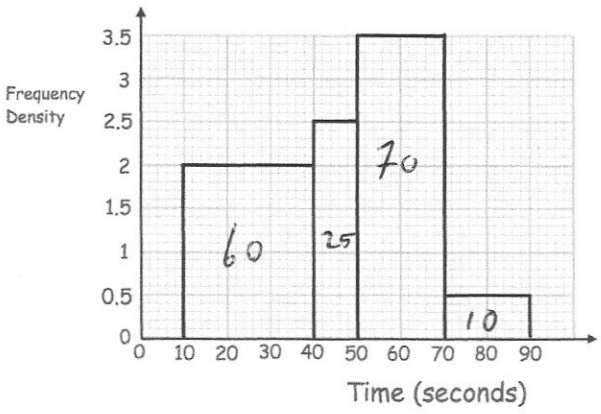
Simplify $5^{-2} \times 100^{0.5}$

$\frac{1}{5^2} \times 10$

$\frac{1}{25} \times 10 = \frac{10}{25}$

$\frac{2}{5}$

A group of students were asked to complete a puzzle. The histogram shows the distribution of the time taken. 10 students took between 70 and 90 seconds.



Work out how many students took between 50 and 70 seconds to complete the puzzle.

70

Calculate an estimate of the number of students who took under 30 seconds to complete the puzzle.

$\frac{2}{3}$ of 60 = 40

The time taken, t seconds, that it takes a water heater to boil water is inversely proportional to the power, p watts, of the water heater.

When P = 2000W, T = 252 seconds.

$T \propto \frac{1}{P}$ $T = \frac{k}{P}$

Find the time it takes to boil water when P = 800W

$252 = \frac{k}{2000}$ $T = \frac{504000}{P}$

$k = 504000$

$T = \frac{504000}{800}$

$T = 630$ seconds

Expand $2\sqrt{3}(3\sqrt{2} + \sqrt{3})$

$6\sqrt{6} + 2\sqrt{9}$

$6\sqrt{6} + 6$