

27th February



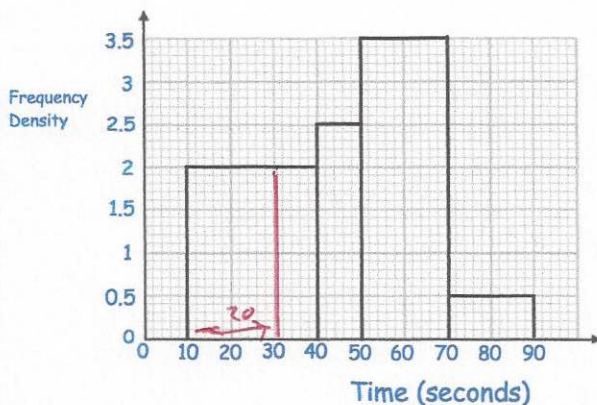
Corbettmaths

Simplify

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

$$\begin{aligned} & \frac{1}{5^2} \times \sqrt{100} \\ & \frac{1}{25} \times 10 \\ & = \frac{10}{25} = \frac{2}{5} \end{aligned}$$

A group of students were asked to complete a puzzle.
The histogram shows the distribution of the times taken.



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

$$20 \times 3.5 = 70$$

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

$$20 \times 2 = 40$$

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.

$$T \propto \frac{1}{p} \quad T = \frac{k}{p}$$

When $P = 2000\text{W}$, $T = 252$ seconds.

$$252 = \frac{k}{2000} \quad k = 504000$$

Find the time it takes to boil water when $P = 800\text{W}$

$$\begin{aligned} T &= \frac{504000}{p} \\ &= \frac{504000}{800} = 630 \text{ seconds} \end{aligned}$$

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

$$6\sqrt{6} + 2(3)$$

$$6\sqrt{6} + 6$$