

22nd February



CorbettmOths

Write 0.0282828... as a simplified fraction

$$\begin{aligned}
 x &= 0.0282828\dots \\
 10x &= 0.282828\dots \\
 1000x &= 28.2828\dots \\
 990x &= 28
 \end{aligned}$$

$$x = \frac{28}{990} = \frac{14}{495}$$

$$\frac{10 - \sqrt{32}}{\sqrt{2}} = a + b\sqrt{2}$$

where a and b are integers.

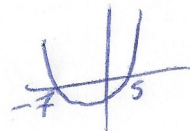
Find the values of a and b.

$$\begin{aligned}
 &\frac{(10 - \sqrt{32})\sqrt{2}}{2} \\
 &\frac{10\sqrt{2} - \sqrt{64}}{2} = \frac{10\sqrt{2} - 8}{2} \\
 &= 5\sqrt{2} - 4
 \end{aligned}$$

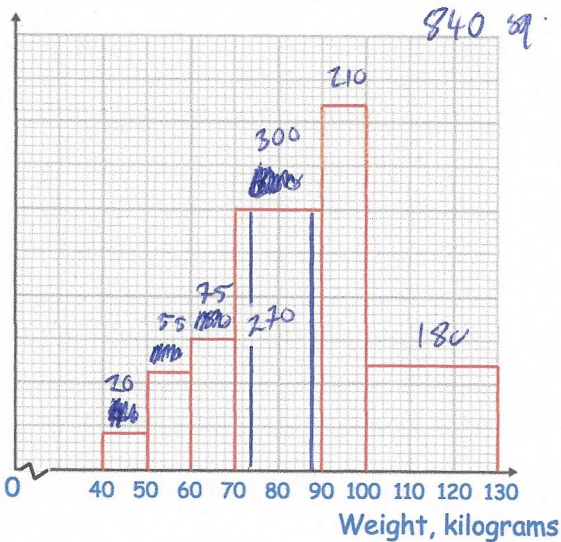
Solve the inequality

$$x^2 + 2x - 35 > 0$$

$$\begin{aligned}
 &(x+7)(x-5) \\
 &x = -7 \quad x = 5
 \end{aligned}$$



$$x < -7 \text{ or } x > 5$$



Shown are the weights of some athletes

Work out an estimate of the median

88

Work out an estimate of the lower quartile

74