



Work out

$$\sqrt{150} - \sqrt{24}$$

$$\begin{array}{r} \sqrt{25} \times \sqrt{6} \quad \sqrt{4} \times \sqrt{6} \\ 5\sqrt{6} \quad - \quad 2\sqrt{6} \end{array}$$

$$3\sqrt{6}$$

$$\mathbf{c} = \begin{pmatrix} -3 \\ q \end{pmatrix} \quad \mathbf{d} = \begin{pmatrix} p \\ 2 \end{pmatrix}$$

$$\text{Given } 4\mathbf{d} - \mathbf{c} = \begin{pmatrix} 1 \\ -7 \end{pmatrix}$$

Work out the values of p and q

$$\begin{pmatrix} 4p \\ 8 \end{pmatrix} - \begin{pmatrix} -3 \\ q \end{pmatrix} = \begin{pmatrix} 1 \\ 7 \end{pmatrix}$$

$$4p + 3 = 1$$

$$4p = -2$$

$$p = -\frac{1}{2}$$

$$8 - q = -7$$

$$q = 15$$

The histogram shows some information about the masses of suitcases.

All suitcases weighed 20kg or less.

90% of the suitcases weighed more than 10kg.

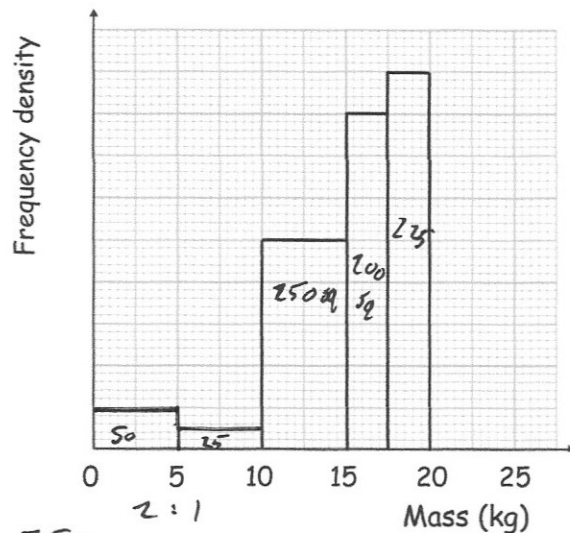
Twice as many suitcases weighed less than 5kg than between 5kg and 10kg.

Complete the histogram.

$$90\% \text{ of total} = 675$$

$$1\% \text{ " " } = 7.5$$

$$100\% \text{ " " } = 750$$



$$\begin{array}{l} 75 \div 3 = 25 \\ 25 \times 2 = 50 \\ 25 \times 1 = 25 \end{array}$$

Work out an estimate of the interquartile range.

LQ 187.5^{th} value/square:

$$10 + \frac{112.5}{250} \times 5 = 12.25 \text{ kg}$$

UQ 562.5^{th} value/square:

$$17.5 + \frac{37.5}{225} \times 2.5 = 17.91\bar{6}$$

$$17.91\bar{6} - 12.25$$

$$5.66\bar{6} \text{ kg}$$