V

Method 2:

$$^2 = \frac{\square^2}{\quad} - {}^{-2}$$

^{2}	6	7	10	11	11	13	16	18	25	Total
	36	49	100	121	121	169	256	324	625	1801

$$^2 = \frac{\square^2}{\quad} - {}^{-2}$$

$$= \frac{1801}{9} - 13^2$$

$$= 200\ 11 - 169$$

$$= 31\ 11 \quad (2\text{dp})$$

Standard Deviation ( )

Since the variance is measured in terms of ^{2}, we often wish to use the standard deviation where $= \sqrt{\text{variance}}$ The standard deviation, unlike the variance, will be measured in the same units as the original data.

In the above example $= \sqrt{31\ 11} = 5\ 58 \quad (2\text{ dp})$

Exercises

Find the variance and standard deviation of the following correct to 2 decimal places:

1. a) 10 16 12 15 9 16 10 17 12 15
   b) 74 72 83 96 64 79 88 69
   c) £326 £438 £375 £366 £419 £424

Answers

1. a) 7.76, 2.79 b) 97.36, 9.87 c) £^{2}1 531 22, £39 13