

- 2 Twenty children were asked to estimate the height of a particular tree. Their estimates, in metres, were as follows.

4.1	4.2	4.4	4.5	4.6	4.8	5.0	5.2	5.3	5.4
5.5	5.8	6.0	6.2	6.3	6.4	6.6	6.8	6.9	19.4

- (a) Find the mean of the estimated heights. [1]

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- (b) Find the median of the estimated heights. [1]

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- (c) Give a reason why the median is likely to be more suitable than the mean as a measure of the central tendency for this information. [1]

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- 3 A sports club has a volleyball team and a hockey team. The heights of the 6 members of the volleyball team are summarised by $\Sigma x = 1050$ and $\Sigma x^2 = 193\,700$, where x is the height of a member in cm. The heights of the 11 members of the hockey team are summarised by $\Sigma y = 1991$ and $\Sigma y^2 = 366\,400$, where y is the height of a member in cm.

- (a) Find the mean height of all 17 members of the club. [2]

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- (b) Find the standard deviation of the heights of all 17 members of the club. [3]

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It is given that

$$\Sigma x = 792, \quad \Sigma x^2 = 43\,504, \quad \Sigma y = 783, \quad \Sigma y^2 = 42\,223.$$

- (c) Find the mean and the standard deviation of the times taken by all 30 runners from the two teams. [3]

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- For n values of the variable x , it is given that

$$\Sigma(x - 50) = 144 \quad \text{and} \quad \Sigma x = 944.$$

Find the value of n .

[3]

[illegible]

- For n values of the variable x , it is given that

$$\Sigma(x - 200) = 446 \quad \text{and} \quad \Sigma x = 6846.$$

Find the value of n .

Find the value of n . [3]

[illegible]

- $$\Sigma(x - 20) = 35 \quad \text{and} \quad \Sigma x^2 = 25\,036.$$

[3]

- 2 A summary of 40 values of x gives the following information:

$$\Sigma(x - k) = 520, \quad \Sigma(x - k)^2 = 9640,$$

where k is a constant.

- (a) Given that the mean of these 40 values of x is 34, find the value of k . [2]

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- (b) Find the variance of these 40 values of x . [2]

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- 1 A summary of 20 values of x gives

$$\Sigma(x - 30) = 439, \quad \Sigma(x - 30)^2 = 12\,405.$$

A summary of another 25 values of x gives

$$\Sigma(x - 30) = 470, \quad \Sigma(x - 30)^2 = 11\,346.$$

- (a) Find the mean of all 45 values of x . [2]

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- (b) Find the standard deviation of all 45 values of x . [2]

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- 1** A summary of 50 values of x gives

$$\Sigma(x - q) = 700, \quad \Sigma(x - q)^2 = 14\,235,$$

where q is a constant.

- (a)** Find the standard deviation of these values of x . [2]

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- (b)** Given that $\Sigma x = 2865$, find the value of q . [2]

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