Calculating skew

Grade 8 | Higher | 5 questions, 21 marks

GCSE Statistics topic practice

Name: _____ **Date:** _____ **Score:** _____ **/ 21**

1 The marks scored by a class in a science test have mean 52, median 55 and standard deviation 6.

a. Calculate the skew of the marks. (2)

b. Describe the skew of the distribution. (1)

(3 marks)

2 The annual salaries of the staff at a company have mean £31 400, median £28 600 and standard deviation £6000.

a. Calculate the skew of the salaries. (2)

b. Interpret your answer to part (a) in context. (1)

c. Which average, the mean or the median, better represents a typical salary at this company? Give a reason for your answer. (1)

(4 marks)

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3 The table shows information about the journey times, in minutes, on two bus routes.

	Mean	Median	Standard deviation
Route A	34	31	6
Route B	30	31.5	9

a. Calculate the skew for each route. (3)

b. Compare the skew of the two distributions. (1)

(4 marks)

4 The ages, x years, of the 20 members of a chess club are summarised below.

$\Sigma x = 480 \quad \Sigma x^2 = 12\,020$

The median age is 22 years.

a. Calculate the mean and the standard deviation of the ages. (3)

b. Calculate the skew of the ages. (2)

(5 marks)

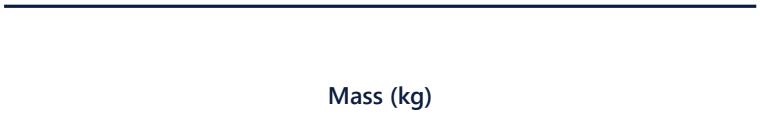
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5 The masses of the dogs at a rescue centre have mean 17.4 kg and standard deviation 8 kg.
The skew of the masses is −0.6

a. Work out the median mass. (3)

b. On the axes, sketch a possible shape for the distribution of the masses. (1)

c. Is a normal distribution a suitable model for these masses? Give a reason for your answer. (1)



(5 marks)

End of questions | Total 21 marks

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