



H05-10min Standardised Scores: 10-minute Pack

EDEXCEL 1ST0 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** In a national aptitude test, raw scores are standardised so that the mean is 100 and the standard deviation is 15.
- (a) A candidate has a standardised score of $z = 2$. Work out the candidate's raw score. (2)
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- (b) Another candidate has a standardised score of $z = -1.4$. Work out the candidate's raw score. (2)
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- (c) Explain what a standardised score of $z = 0$ tells you about a candidate's raw score, without doing any further calculation. (1)

(Total for Question 1 is 5 marks)

2 For each statement about standardised (z) scores, write down whether it is True or False.

(i) A z-score of 0 means the raw value is exactly equal to the mean. **(1)**

.....
(ii) A negative z-score always means the data value is a poor or unwanted result. **(1)**

.....
(iii) The larger the size of a z-score, ignoring its sign, the further the value is from the mean. **(1)**

.....
(iv) Two data sets with the same standard deviation will always give the same z-score for the same raw value. **(1)**

.....
(Total for Question 2 is 4 marks)

Mark scheme • H05-10min Standardised Scores: 10-minute Pack

Question 1

- (a) **M1** $100 + 2 \times 15$, oe
- (a) **A1** 130 cao
- **(a) Answer: 130**
- (b) **M1** $100 + (-1.4) \times 15$, oe
- (b) **A1** 79 cao
- **(b) Answer: 79**
- (c) **B1** the candidate's raw score is exactly equal to the mean (100), i.e. an average result oe
- **(c) Answer: The candidate's raw score equals the mean, 100 - an exactly average result.**

Question 2

- (i) **B1** True cao
- **(i) Answer: True**
- (ii) **B1** False cao
- **(ii) Answer: False**
- (iii) **B1** True cao
- **(iii) Answer: True**
- (iv) **B1** False cao (the mean also affects the z-score, oe)
- **(iv) Answer: False**