4.20 Scatter Graphs: 10-minute Pack

EDEXCEL 1MA1 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A market trader sells sun hats. State the type of correlation you would expect between the number of hours of sunshine in a day and the number of sun hats sold that day.

(Total for Question 1 is 1 mark)

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2 A scatter graph shows a strong negative correlation between two variables. Which statement correctly describes this?

- ☐ A) As one variable increases, the other variable also increases.
- ☐ B) As one variable increases, the other variable decreases.
- ☐ C) There is no relationship between the two variables.
- ☐ D) Both variables always stay the same value.

(Total for Question 2 is 1 mark)

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3 A scatter graph is drawn for the temperature (x °C) and the number of ice creams sold (y). The plotted points are (1, 12), (2, 15), (3, 7), (4, 3), (5, 5), (6, 17), (7, 16), (8, 12).
Describe the correlation shown by the scatter graph.

(Total for Question 3 is 2 marks)

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4 On a scatter graph, a line of best fit passes through the points (9, 19.5) and (21, 25.5).
Find the equation of the line of best fit, and use it to estimate y when x = 12.

(Total for Question 4 is 4 marks)

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Mark scheme · 4.20 Scatter Graphs: 10-minute Pack

Question 1

positive correlation (oe) **B1**

Answer: Positive correlation

Question 2

correct option B **B1**

Answer: B

Question 3

compares how y changes as x increases **M1**

no correlation **A1**

Answer: no correlation

Question 4

gradient (25.5 - 19.5) / (21 - 9) **M1**

finds the intercept **M1**

y = 0.5x + 15 **A1**

estimate 21 **A1**

Answer: y = 0.5x + 15; estimate 21

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