EP.M136 GL Assessment Style Maths Mock Paper 2

GL ASSESSMENT GL-11PLUS-MOCK2 · Calculators not allowed · about 55 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 What is 7,204 rounded to the nearest 1000?

- ☐ A) 7,000
- ☐ B) 8,000
- ☐ C) 7,200
- ☐ D) 7,004
- ☐ E) 7,100

(Total for Question 1 is 1 mark)

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2 Write 3/4 as a decimal.

- ☐ A) 0.25
- ☐ B) 0.3
- ☐ C) 0.75
- ☐ D) 0.333
- ☐ E) 1.25

(Total for Question 2 is 1 mark)

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3 A rectangle has length 9 cm and width 4 cm. What is its area in cm^2?

- ☐ A) 13 cm^2
- ☐ B) 36 cm^2
- ☐ C) 26 cm^2
- ☐ D) 18 cm^2
- ☐ E) 9 cm^2

(Total for Question 3 is 1 mark)

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4 Amir bought 3 chocolate bars costing £1.70 each and a drink costing £0.95. Work out the total cost.

(Total for Question 4 is 2 marks)

5 A bag contains 5 red, 3 blue and 2 green counters. A counter is chosen at random. What is the probability it is blue?

- ☐ A) 1/2
- ☐ B) 3/10
- ☐ C) 3/9
- ☐ D) 3/8
- ☐ E) 2/5

(Total for Question 5 is 2 marks)

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6 What is the next number in the sequence: 7, 10, 13, 16, __?

- ☐ A) 18
- ☐ B) 19
- ☐ C) 20
- ☐ D) 21
- ☐ E) 22

(Total for Question 6 is 1 mark)

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7 Three angles in a triangle are in the ratio 2:3:4. Work out the size of the smallest angle.

(Total for Question 7 is 2 marks)

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8 A car travels 150 km in 2 hours 30 minutes. Calculate its average speed in km/h. Give your answer correct to 1 decimal place.

(Total for Question 8 is 3 marks)

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9 Write 4,500 as a product of its prime factors.

(Total for Question 9 is 2 marks)

10 Sofia shares £48 in the ratio 3:5. How much does the larger share get?

- ☐ A) £18
- ☐ B) £20
- ☐ C) £30
- ☐ D) £32
- ☐ E) £35

(Total for Question 10 is 1 mark)

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11 A shop reduces the price of a jacket by 25%. The reduced price is £45. What was the original price?

(Total for Question 11 is 2 marks)

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12 The times (in minutes) taken by 6 pupils to complete a task are: 12, 15, 18, 15, 20, 10. Find the median and the range.

(Total for Question 12 is 3 marks)

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13 Express 0.0062 in standard form.

- ☐ A) 6.2×10^{-3}
- ☐ B) 6.2×10^{-4}
- ☐ C) 0.62×10^{-2}
- ☐ D) 62×10^{-5}
- ☐ E) 0.62×10^{-3}

(Total for Question 13 is 1 mark)

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14 A right-angled triangle has legs 6 cm and 8 cm. Find the length of the hypotenuse.

(Total for Question 14 is 2 marks)

15 Li orders 7 identical notebooks and a ruler. The total cost is £21.40. If the ruler costs £1.60, find the cost of one notebook.

(Total for Question 15 is 3 marks)

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16 How many minutes are there in 2 hours 45 minutes?

- ☐ A) 105
- ☐ B) 145
- ☐ C) 165
- ☐ D) 120
- ☐ E) 175

(Total for Question 16 is 1 mark)

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17 A spinner has sections labelled 1, 2, 3 and 4. The probability of landing on 4 is twice the probability of landing on 1, and the probabilities of landing on 1, 2 and 3 are all equal to each other. Find the probability of landing on 2.

(Total for Question 17 is 2 marks)

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18 Expand and simplify: $3(2x + 4) - 5x$

(Total for Question 18 is 3 marks)

19 A rectangular garden is divided into 12 equal square paving slabs along its length and 5 equal square slabs along its width. Each slab is 0.8 m by 0.8 m. Find the area of the garden in square metres.

(Total for Question 19 is 4 marks)

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20 A school collected the heights (in cm) of 5 pupils: 140, 142, 138, 145, 135. Calculate the mean height and give your answer to 1 decimal place.

(Total for Question 20 is 3 marks)

Mark scheme · EP.M136 GL Assessment Style Maths Mock Paper 2

Question 1

- **B1** correct option A (7,000) cao
- **Answer: A) 7,000**

Question 2

- **B1** correct option C (0.75) cao
- **Answer: C) 0.75**

Question 3

- **B1** correct option B (36 cm^2) cao
- **Answer: B) 36 cm^2**

Question 4

- **M1** 3 x 1.70 or equivalent seen (method) eg 1.70 + 1.70 + 1.70 = 5.10
- **A1** £6.05 cao
- **Answer: £6.05**

Question 5

- **M1** probability method: 3 blue out of total 10 seen
- **A1** 3/10 cao
- **Answer: 3/10**

Question 6

- **B1** correct option B (19) cao
- **Answer: B) 19**

Question 7

- **M1** method: sum 2+3+4 = 9 and 180/9 or equivalent seen
- **A1** 40 degrees cao
- **Answer: 40 degrees**

Question 8

- **M1** convert time to hours: 2.5 hours seen or equivalent
- **M1** method: 150 / 2.5 seen = 60
- **A1** 60.0 km/h cao
- **Answer: 60.0 km/h**

Question 9

- **M1** correct factor tree work or 4500 = 45 x 100 or equivalent seen
- **A1** 2^2 x 3^2 x 5^3 cao
- **Answer: 2^2 x 3^2 x 5^3**

Question 10

- **B1** correct option C (£30) cao
- **Answer: C) £30**

Question 11

- **M1** method: reduced price = 75% so 45 = 0.75 x original or equivalent 45/0.75
- **A1** £60.00 cao
- **Answer: £60.00**

Question 12

- **M1** order data and identify middle values method or range method seen
- **M1** median method: middle two values (15 and 15) used giving 15
- **A1** median 15 and range 10 cao
- **Answer: Median = 15 minutes, Range = 10 minutes**

Question 13

- **B1** correct option A (6.2×10^{-3}) cao
- **Answer: A) 6.2×10^{-3}**

Question 14

- **M1** Pythagoras method: $6^2 + 8^2 = 36 + 64 = 100$ seen
- **A1** 10 cm cao
- **Answer: 10 cm**

Question 15

- **M1** method: subtract ruler cost from total: 21.40 - 1.60 = 19.80 seen
- **M1** method: divide 19.80 by 7 seen
- **A1** £2.83 cao (to 2 dp) or £2.828... with indication of rounding
- **Answer: £2.83**

Question 16

- **B1** correct option C (165) cao
- **Answer: C) 165**

Question 17

- **M1** assign probabilities: let p for 1, 2 and 3 equal q such that 4 = 2p and 2 and 3 equal p each or set ratio 1:1:1:2 total 5 seen
- **A1** 1/5 cao
- **Answer: 1/5**

Question 18

- **M1** expand 3(2x + 4) to 6x + 12 seen
- **M1** subtract 5x method: (6x + 12) - 5x seen
- **A1** x + 12 cao
- **Answer: x + 12**

Question 19

- **M1** method: find garden dimensions using slabs: length = 12 x 0.8, width = 5 x 0.8 seen
- **M1** calculate numeric dimensions: length = 9.6 m and width = 4.0 m seen
- **M1** method: area = length x width seen
- **A1** 38.4 m^2 cao
- **Answer: 38.4 m^2**

Question 20

- **M1** method: sum heights seen: 140 + 142 + 138 + 145 + 135 = 700
- **M1** divide by 5 method seen: 700 / 5 = 140
- **A1** 140.0 cm cao
- **Answer: 140.0 cm**