2.56 Non-Calculator Reasoning Paper A: 30-minute Pack

GL ASSESSMENT GL-11PLUS-MATHS · Calculators not allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Work out 15% of 260.

(2)

2 A cafe sells coffee for £2.60 and tea for £1.90. On Tuesday it sold 45 coffees and 30 teas. Work out the total amount of money taken.

(3)

3 The mean of five numbers is 18. Four of the numbers are 12, 15, 21 and 24. Find the fifth number.

(3)

4 Work out 7 x 8 - 6.

(1)

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5 A jacket normally costs £64. In a sale it is reduced by 25%. Sam has a voucher for a further 10% off the sale price. Work out the final price Sam pays.

(3)

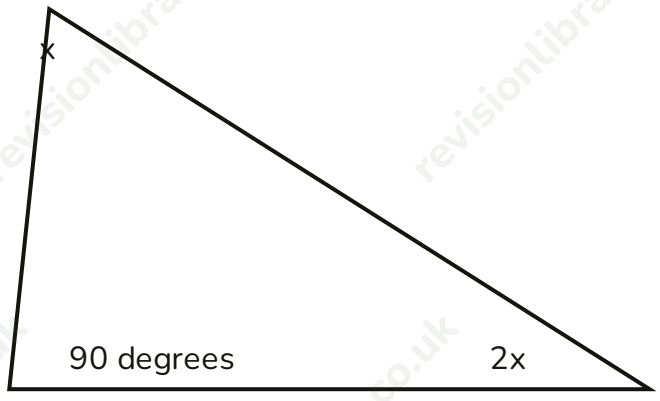
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6 Kofi, Leila and Mia have ages that are three consecutive even numbers. The sum of their ages is 42. Mia is the oldest of the three. Find Mia's age.

(3)

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7 A triangle has one angle of 90 degrees. The second angle is twice the size of the third angle. Find the size of the third angle.



(3)

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8 The nth term of a sequence is given by $3n^2 - 5$. Work out the 6th term of the sequence.

(3)

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9 Amir thinks of a number. He doubles it, then adds 15, then divides the result by 3. His final answer is 19. Work out the number Amir started with.

(4)

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10 Three consecutive whole numbers have a sum that is equal to twice the largest of the three numbers, plus 15. Find the three numbers.

(4)

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11 A number, when rounded to the nearest 100, gives 3600. Write down the smallest whole number it could have been.

(2)

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12 Find 3/8 of 96.

(2)

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13 Write these fractions in order of size, starting with the smallest: 3/5, 7/10, 13/20

(2)

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Mark scheme · 2.56 Non-Calculator Reasoning Paper A: 30-minute Pack

Question 1

10% = 26 and 5% = 13 (oe)	**M1**
39 cao	**A1**

Answer: 39

Question 2

45 x 2.60 = 117 (oe)	**M1**
30 x 1.90 = 57 (oe)	**M1**
£174 cao	**A1**

Answer: £174

Question 3

total of the five numbers = 5 x 18 = 90 (oe)	**M1**
sum of the given four numbers = 12 + 15 + 21 + 24 = 72 (oe)	**M1**
18 cao	**A1**

Answer: 18

Question 4

50 cao	**B1**

Answer: 50

Question 5

25% of 64 = 16, so sale price = 48 (oe)	**M1**
10% of 48 = 4.80 (oe)	**M1**
£43.20 cao	**A1**

Answer: £43.20

Question 6

sets up three consecutive even numbers, e.g. n - 2, n, n + 2 (oe)	**M1**
3n = 42, so n = 14 (oe)	**M1**
16 cao	**A1**

Answer: 16

Question 7

90 + 2x + x = 180 (oe)	**M1**
3x = 90 (oe)	**M1**
30 degrees cao	**A1**

Answer: 30 degrees

Question 8

6^2 = 36 (oe)	**M1**
3 x 36 = 108 (oe)	**M1**
103 cao	**A1**

Answer: 103

Question 9

reverses the final step: 19 x 3 = 57 (oe)	**M1**
reverses the addition: 57 - 15 = 42 (oe)	**M1**
reverses the doubling: 42 / 2 (oe), or sets up and solves (2x + 15) / 3 = 19	**M1**
21 cao	**A1**

Answer: 21

Question 10

lets the numbers be n - 1, n, n + 1 (oe), so their sum is 3n	**M1**
sets up the equation 3n = 2(n + 1) + 15 (oe)	**M1**
solves to give n = 17 (oe)	**M1**
16, 17, 18 cao	**A1**

Answer: 16, 17, 18

Question 11

identifies that numbers from 3550 up to (but not including) 3650 round to 3600 (oe)	**M1**
3550 cao	**A1**

Answer: 3550

Question 12

96 / 8 = 12 (oe)	**M1**
36 cao	**A1**

Answer: 36

Question 13

converts to a common denominator of 20: 12/20, 14/20, 13/20 (oe)	**M1**
3/5, 13/20, 7/10 cao	**A1**

Answer: 3/5, 13/20, 7/10

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