2.56-2 Non-Calculator Reasoning Paper B: 30-minute Pack

Total Marks

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

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Work out 35% of 180.

(2)

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2 A cinema sells adult tickets for £8.50 and child tickets for £5.25. On Saturday it sold 60 adult tickets and 45 child tickets. Work out the total amount of money taken.

(3)

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3 The mean of five numbers is 22. Four of the numbers are 14, 19, 25 and 31. Find the fifth number.

(3)

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4 Work out 9 x 7 - 8.

(1)

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5 A jumper normally costs £54. In a sale it is reduced by 20%. Priya has a loyalty card giving a further 5% off the sale price. Work out the final price Priya pays.

(3)

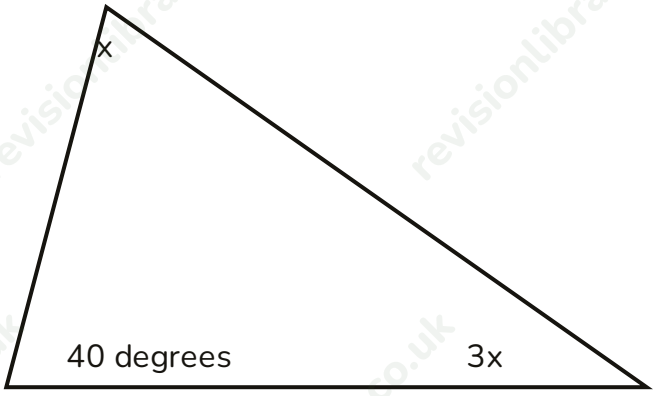
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6 Kofi, Layla and Mia have ages that are three consecutive odd numbers. The sum of their ages is 51. Mia is the oldest of the three. Find Mia's age.

(3)

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7 A triangle has one angle of 40 degrees. The second angle is three times 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 $4n^2 - 7$. Work out the 5th term of the sequence.

(3)

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9 Amelia thinks of a number. She multiplies it by 4, subtracts 9, then divides the result by 5, giving a final answer of 7. Work out the number Amelia started with.

(3)

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10 Three consecutive even numbers have a sum that is equal to twice the largest of the three numbers, plus 18. Find the three numbers.

(4)

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11 A number, when rounded to the nearest 100, gives 4200. Write down the largest whole number it could have been.

(2)

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12 Find 5/9 of 108.

(2)

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13 Write these fractions in order of size, starting with the smallest: 5/8, 3/4, 13/16

(2)

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Mark scheme · 2.56-2 Non-Calculator Reasoning Paper B: 30-minute Pack

Question 1

10% = 18 and 5% = 9 (oe)	**M1**
63 cao	**A1**

Answer: 63

Question 2

60 x 8.50 = 510 (oe)	**M1**
45 x 5.25 = 236.25 (oe)	**M1**
£746.25 cao	**A1**

Answer: £746.25

Question 3

total of the five numbers = 5 x 22 = 110 (oe)	**M1**
sum of the given four numbers = 14 + 19 + 25 + 31 = 89 (oe)	**M1**
21 cao	**A1**

Answer: 21

Question 4

55 cao	**B1**

Answer: 55

Question 5

20% of 54 = 10.80, so sale price = 43.20 (oe)	**M1**
5% of 43.20 = 2.16 (oe)	**M1**
£41.04 cao	**A1**

Answer: £41.04

Question 6

sets up three consecutive odd numbers, e.g. n - 2, n, n + 2 (oe)	**M1**
3n = 51, so n = 17 (oe)	**M1**
19 cao	**A1**

Answer: 19

Question 7

40 + 3x + x = 180 (oe)	**M1**
4x = 140 (oe)	**M1**
35 degrees cao	**A1**

Answer: 35 degrees

Question 8

5^2 = 25 (oe)	**M1**
4 x 25 = 100 (oe)	**M1**
93 cao	**A1**

Answer: 93

Question 9

reverses the final division: 7 x 5 = 35 (oe)	**M1**
reverses the subtraction and multiplication: 35 + 9 = 44, then 44 / 4 (oe)	**M1**
11 cao	**A1**

Answer: 11

Question 10

lets the numbers be n - 2, n, n + 2 (oe), so their sum is 3n	**M1**
sets up the equation 3n = 2(n + 2) + 18 (oe)	**M1**
solves to give n = 22 (oe)	**M1**
20, 22, 24 cao	**A1**

Answer: 20, 22, 24

Question 11

identifies that numbers from 4150 up to (but not including) 4250 round to 4200 (oe)	**M1**
4249 cao	**A1**

Answer: 4249

Question 12

108 / 9 = 12 (oe)	**M1**
60 cao	**A1**

Answer: 60

Question 13

converts to a common denominator of 16: 10/16, 12/16, 13/16 (oe)	**M1**
5/8, 3/4, 13/16 cao	**A1**

Answer: 5/8, 3/4, 13/16

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