2.47-5 Mixed Problem-Solving Paper E: Test Pack

GL ASSESSMENT GL-11PLUS-MATHS · Calculators not allowed · about 20 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Nadia buys a notebook for £2.75 and a rubber for £0.60. She pays with a £5 note. How much change does she receive?

(2)

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2 A patio is made up of two rectangular sections. The first section measures 7 m by 5 m and the second section measures 3 m by 2 m. Find the total area of the patio.

(3)

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3 Tariq paints 3/10 of a fence on Saturday and 2/5 of the fence on Sunday. What fraction of the fence is still unpainted?

(3)

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4 A youth club needs to transport 142 members to a residential trip. Each minibus seats 16 people. What is the smallest number of minibuses needed to carry everyone?

(3)

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5 The ratio of Rohan's age to his father's age is 2:7. In 3 years' time, the ratio of their ages will be 1:3. Find Rohan's present age.

(4)

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6 A rectangular allotment plot measures 26 m by 11 m. Find the perimeter of the plot.

(2)

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7 Write these fractions in order, starting with the smallest: 3/4, 5/6, 7/9

(2)

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Mark scheme · 2.47-5 Mixed Problem-Solving Paper E: Test Pack

Question 1

2.75 + 0.60 = 3.35 (total spent)	**M1**
£1.65 cao	**A1**

Answer: £1.65

Question 2

7 x 5 = 35 (area of the first section)	**M1**
3 x 2 = 6 (area of the second section)	**M1**
41 m² cao	**A1**

Answer: 41 m^2

Question 3

converts to a common denominator: 3/10 stays as 3/10 and 2/5 = 4/10	**M1**
3/10 + 4/10 = 7/10 (total fraction painted)	**M1**
3/10 cao	**A1**

Answer: 3/10

Question 4

attempts 142 / 16, e.g. 16 x 8 = 128	**M1**
identifies a remainder of 14 people (142 - 128), who still need transport	**dM1**
9 cao	**A1**

Answer: 9 minibuses

Question 5

sets Rohan's age = 2x and his father's age = 7x now, from the ratio 2:7; accept an equivalent route to the same value without algebra, such as reasoning in ratio units	**M1**
forms the equation (2x + 3)/(7x + 3) = 1/3, i.e. 3(2x + 3) = 7x + 3	**M1**
solves 6x + 9 = 7x + 3 to give x = 6	**M1**
12 cao	**A1**

Answer: 12 years old

Question 6

26 + 11 = 37, or 2 x 26 + 2 x 11	**M1**
74 m cao	**A1**

Answer: 74 m

Question 7

converts all three fractions to a common denominator of 36 (27/36, 30/36, 28/36), or uses an equivalent correct comparison method	**M1**
3/4, 7/9, 5/6 cao (correct order)	**A1**

Answer: 3/4, 7/9, 5/6

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