2.21-4 Worded Problems Set D: 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 A prize fund of £96 is split between the winner and the runner-up in the ratio 5:3. How much is the runner-up's prize worth?

(2)

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2 A number is multiplied by 6, then 11 is subtracted, giving an answer of 43. What is the number?

(2)

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3 A rectangular allotment measures 9 m by 6 m. Safiya wants to spread compost over the allotment, using 1 bag of compost for every 9 square metres. How many bags of compost does she need?

(2)

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4 8 identical exercise books cost £11.20 in total. How much would 5 of the same exercise books cost?

(2)

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5 A barrel contains 36 litres of water. 5/9 of the water is used to fill a paddling pool. How many litres of water are left in the barrel?

(2)

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6 A swimming gala starts at 09:40 and lasts 55 minutes. What time does it finish?

(1)

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7 Idris's uncle is 5 years more than 3 times Idris's age. Idris's uncle is 44 years old. How old is Idris?

(2)

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8 In a survey of 40 pupils, 1/5 walk to school, 3/8 come by bus, and the rest cycle. How many pupils cycle?

(3)

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9 A garden centre sells bags of compost. Each bag normally costs £3.60. There is an offer: buy 2 bags at full price and get a 3rd bag at half price.

(a) Using the offer, Kacper buys 3 bags. How much does he pay? **(1)**

.....

(b) Using the same offer, how much would 6 bags cost in total? **(2)**

.....

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10 On 11/09, a coach leaves a school at 08:30 for a trip to a castle 105 km away. It travels the first 63 km at an average speed of 42 km/h, then stops for a 10 minute break.

(a) At what time does the coach finish the first 63 km, before the break? **(1)**

.....

(b) The coach then covers the remaining distance at an average speed of 35 km/h. At what time does it arrive at the castle? **(2)**

.....

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11 A market stall's takings for the day are shared between three sellers, Layla, Mohammed and Anisa, in the ratio 3:5:4. The total takings are £360.

(a) How much does Mohammed receive? **(2)**

.....

(b) Mohammed spends 2/5 of his share on new stock for the next market. How much does he have left? **(2)**

.....

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12 Jasmine drives 84 km to visit her cousin. Her car uses 6 litres of petrol for every 40 km she drives.

(a) How many litres of petrol does she use for the whole 84 km journey? **(2)**

.....

(b) Petrol costs £1.45 per litre. What is the total cost of the petrol used for the journey? **(2)**

.....

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13 A packet of flour weighs 1.5 kg. What is this weight in grams?

(1)

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14 In a fruit basket, the ratio of bananas to apples is 4:3. There are 12 bananas. How many apples are there?

(1)

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Mark scheme · 2.21-4 Worded Problems Set D: 30-minute Pack

Question 1

total parts = 8, one part = 96 / 8 = £12 **M1**

£36, from 3 x £12 **A1**

Answer: £36

Question 2

sets up 6x - 11 = 43, or equivalent, and finds 6x = 54 **M1**

9 **A1**

Answer: 9

Question 3

finds the area of the allotment = 9 x 6 = 54 m² **M1**

6 bags, from 54 / 9 **A1**

Answer: 6 bags

Question 4

finds the cost of 1 exercise book = 11.20 / 8 = £1.40 **M1**

£7.00, from 5 x £1.40 **A1**

Answer: £7.00

Question 5

finds water used = 5/9 x 36 = 20 litres **M1**

16 litres **A1**

Answer: 16 litres

Question 6

10:35 **B1**

Answer: 10:35

Question 7

sets up 3x + 5 = 44, or equivalent, and finds 3x = 39 **M1**

13 years old **A1**

Answer: 13 years old

Question 8

finds pupils who walk = 1/5 x 40 = 8 **M1**

finds pupils who come by bus = 3/8 x 40 = 15 **M1**

17 pupils, from 40 - 8 - 15 **A1**

Answer: 17 pupils

Question 9

(a) £9.00, from 2 x £3.60 + £1.80 **B1**

(a) Answer: £9.00

(b) recognises that 6 bags under the offer means two groups of (2 full price + 1 half price) **M1**

(b) £18.00, from 2 x £9.00 **A1**

(b) Answer: £18.00

Question 10

(a) 10:00 **B1**

(a) Answer: 10:00

(b) finds the time after the break (10:00 + 0:10 = 10:10) and the remaining journey time (42 / 35 = 1.2 hours = 1 hour 12 minutes) **M1**

(b) 11:22 **A1**

(b) Answer: 11:22

Question 11

(a) total ratio parts = 3 + 5 + 4 = 12, one part = 360 / 12 = £30 **M1**

(a) £150 (Mohammed's 5 parts x £30) **A1**

(a) Answer: £150

(b) finds amount spent = 2/5 x £150 = £60 **M1**

(b) £90 left **A1**

(b) Answer: £90

Question 12

(a) finds the petrol rate = 6 / 40 = 0.15 litres per km, or equivalent unitary method **M1**

(a) 12.6 litres **A1**

(a) Answer: 12.6 litres

(b) sets up 12.6 x 1.45, for example as 12.6 x 1 + 12.6 x 0.45 **M1**

(b) £18.27 **A1**

(b) Answer: £18.27

Question 13

1500 g, with correct conversion 1 kg = 1000 g **B1**

Answer: 1500 g

Question 14

9 apples, with correct scaling shown or implied **B1**

Answer: 9 apples

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