2.33-3 Problem Solving and Logic Set C: 10-minute Pack

GL ASSESSMENT GL · Calculators not allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Three friends - Noah, Zara and Priya - each own a different number of pets: 1, 2 or 3.
- Noah owns more pets than Zara.
- Priya does not own the most pets.

Who owns the most pets?

- ☐ A) Noah
- ☐ B) Zara
- ☐ C) Priya
- ☐ D) Cannot be determined

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2 A train leaves London at 09:47 and arrives in Bristol at 11:15. The journey was delayed by 12 minutes due to signalling. What was the scheduled journey time, in minutes, before the delay?

(3)

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3 Priya thinks of a number. She doubles it, then subtracts 7. She then divides the result by 3, and gets an answer of 9. What number did Priya start with?

(3)

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4 The ratio of Tom's age to his father's age is 2:7. In 5 years' time, the ratio of their ages will be 1:3. How old is Tom now?

(4)

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Mark scheme · 2.33-3 Problem Solving and Logic Set C: 10-minute Pack

Question 1

eliminates Zara (fewer than Noah) and Priya (not the most) from owning the most	**M1**
A (Noah) cao	**A1**

Answer: A) Noah

Question 2

finds the actual journey time = 1 hour 28 minutes (88 minutes)	**M1**
subtracts the delay, 88 - 12 oe	**M1**
76 minutes cao	**A1**

Answer: 76 minutes

Question 3

reverses the final step: 9 x 3 = 27	**M1**
reverses the subtraction: 27 + 7 = 34	**M1**
17 cao (34 / 2)	**A1**

Answer: 17

Question 4

sets Tom's age = 2x and father's age = 7x	**M1**
forms (2x + 5)/(7x + 5) = 1/3 oe, e.g. 3(2x + 5) = 7x + 5	**M1**
solves to x = 10 (dependent on previous M1)	**dM1**
20 cao	**A1**

Answer: 20

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