2.57-4 Number Puzzles and Logic Set D: 10-minute Pack

GL ASSESSMENT GL · Calculators not allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Paint mix A is made from blue and white paint in the ratio 3:2. Paint mix B is made from blue and white paint in the ratio 1:3. Sanjay mixes 500 ml of Paint A with 500 ml of Paint B. How much blue paint is there in total in the new mixture?

(3)

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2 Declan and Tariq have 83 stickers between them. Declan has 11 more than Tariq. How many does Tariq have?

- ☐ A) 36
- ☐ B) 41.5
- ☐ C) 23.5
- ☐ D) 37
- ☐ E) 47

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3 Look at this sequence: 2, 5, 10, 17, 26, ... What is the next term?

(3)

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4 Leon is 11 years old. His sister Nia is 5 years older than him. How old will Nia be in 8 years' time?

(2)

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5 A 4-digit code is made using four different digits chosen from 2, 3, 7, 8 and 9 (each digit used at most once). How many such codes are even and greater than 7000?

(4)

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Mark scheme · 2.57-4 Number Puzzles and Logic Set D: 10-minute Pack

Question 1

blue paint in mix A = 3/5 x 500 = 300 ml oe	**M1**
blue paint in mix B = 1/4 x 500 = 125 ml oe	**M1**
425 ml cao	**A1**

Answer: 425 ml

Question 2

correct option A (36) cao	**B1**

Answer: A) 36

Question 3

finds the differences between terms: 3, 5, 7, 9 oe	**M1**
identifies the differences increase by 2 each time, so the next difference is 11 oe	**M1**
37 cao	**A1**

Answer: 37

Question 4

Nia's age now = 11 + 5 = 16 oe	**M1**
24 cao	**A1**

Answer: 24

Question 5

identifies the even digits available are 2 and 8, so the code must end in 2 or 8	**M1**
for codes ending in 2, the first digit must be 7, 8 or 9 (to exceed 7000); with the middle two digits arranged from the remaining 3 digits, this gives 3 x 3 x 2 = 18 codes oe	**M1**
for codes ending in 8, the first digit must be 7 or 9, giving 2 x 3 x 2 = 12 codes oe	**M1**
30 cao	**A1**

Answer: 30

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