2.15-2 Logic and Puzzle Problems: Practice Set 2: 10-minute Pack

Total Marks

GL ASSESSMENT GL11-MATHS-LOGIC · Calculators not allowed · about 10 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 I think of a number, double it, then add 7. The result is 31. What was my number?

- ☐ A) 10
- ☐ B) 11
- ☐ C) 12
- ☐ D) 13
- ☐ E) 19

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2 In this 3 by 3 grid, every row and every column adds up to 30: Row 1: 7, 12, 11. Row 2: 14, a, 6. Row 3: 9, 8, b.

(a) Find the value of a. **(2)**

.....

(b) Find the value of b. **(2)**

.....

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3 Three sisters - Priya, Sana and Beth - have different amounts of pocket money: £5, £8 and £12, though not necessarily in that order. (1) Priya has more than Sana. (2) Beth does not have the least amount. (3) Priya has less than Beth. How much money does Priya have?

- ☐ A) £8
- ☐ B) £10
- ☐ C) £15
- ☐ D) £5
- ☐ E) £12

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4 In a code, every letter is replaced by the letter 2 places earlier in the alphabet (so D becomes B and E becomes C), wrapping round so B becomes Z and A becomes Y. Using this code, what does the word BRAIN become?

- ☐ A) DTCKP
- ☐ B) XPYGL
- ☐ C) ZPYGL
- ☐ D) ZPWGL
- ☐ E) ZPYGM

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5 Look at this group of numbers: 14, 21, 28, 33, 42, 49. Which number is the odd one out?

- ☐ A) 14
- ☐ B) 21
- ☐ C) 33
- ☐ D) 42
- ☐ E) 49

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Mark scheme · 2.15-2 Logic and Puzzle Problems: Practice Set 2: 10-minute Pack

Question 1

reverse the operations: (31-7)/2 (oe)	**M1**
12 cao	**A1**

Answer: 12

Question 2

(a) 14+a+6=30 (oe)	**M1**
(a) a=10 cao	**A1**

(a) Answer: 10

(b) 9+8+b=30 (oe)	**M1**
(b) b=13 cao	**A1**

(b) Answer: 13

Question 3

use clues 1 and 2 to fix Sana=5 (oe)	**M1**
A cao	**A1**

Answer: A) £8

Question 4

shift each letter 2 places earlier in the alphabet, wrapping A and B round to Y and Z (oe)	**M1**
ZPYGL cao	**A1**

Answer: ZPYGL

Question 5

test each number for divisibility by 7 (oe)	**M1**
33 cao	**A1**

Answer: 33

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