2.88 Working Backwards with Inverse Operations: 10-minute Pack

Total Marks

GL ASSESSMENT GL-11PLUS-MATHS · Calculators not allowed · about 10 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A driver halves the miles driven, then adds 12 miles and multiplies the result by 4 to get 200 miles. How many miles were driven at the start?

(3)

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2 I think of a number. I multiply it by 3 and then add 5. The result is 29. What was my number?

- ☐ A) 12
- ☐ B) 8
- ☐ C) 24
- ☐ D) 72
- ☐ E) 9

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3 Ewan spends two thirds of their money, then spends a quarter of what is left, then spends £13. Ewan has £92 left. How much did Ewan have at the start?

- ☐ A) £419
- ☐ B) £105
- ☐ C) £420
- ☐ D) £421
- ☐ E) £197

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4 Sana spends £2, then spends half of what is left. Sana has £131 left. How much did Sana have at the start?

- [ ] A) £262.00
- [ ] B) £133.00
- [ ] C) £198.50
- [ ] D) £264.00
- [ ] E) £265.00

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5 I think of a number and then subtract 2, then multiply by 7, then divide by 3. The result is 14. What was my number?

- [ ] A) 8
- [ ] B) 4
- [ ] C) 28
- [ ] D) 10
- [ ] E) 9

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6 Declan spends a sixth of their money, then spends £2, then spends £7. Declan has £181 left. How much did Declan have at the start?

- [ ] A) £240.00
- [ ] B) £371.00
- [ ] C) £190.00
- [ ] D) £229.00
- [ ] E) £228.00

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7 Rhys spends a sixth of their money, then spends £8. Rhys has £322 left. How much did Rhys have at the start?

- [ ] A) £408.00
- [ ] B) £396.00
- [ ] C) £330.00
- [ ] D) £384.00
- [ ] E) £652.00

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8 I think of a number and then multiply by 4, then divide by 2, then subtract 11. The result is 33. What was my number?

- [ ] A) 21
- [ ] B) 22
- [ ] C) 23
- [ ] D) 26
- [ ] E) 55

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9 Yusuf spends two thirds of their money, then spends £11. Yusuf has £21 left. How much did Yusuf have at the start?

- [ ] A) £32.00
- [ ] B) £97.00
- [ ] C) £96.00
- [ ] D) £53.00
- [ ] E) £108.00

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Mark scheme · 2.88 Working Backwards with Inverse Operations: 10-minute Pack

A correct answer earns full marks unless the question asks for working, a method, proof or explanation.

Question 1

Undo multiplication: 200 / 4 = 50 seen	**M1**
Undo addition: 50 - 12 = 38 seen	**M1**
Original miles 76 cao (38 x 2 = 76)	**A1**

Answer: 76 (200 / 4 = 50; 50 - 12 = 38; 38 x 2 = 76).

Question 2

correct option B (8) cao	**B1**

Answer: B) 8 (because (29 - 5) / 3 = 8).

Question 3

correct option C (£420) cao	**B1**

Answer: C) £420

Question 4

correct option D (£264.00) cao	**B1**

Answer: D) £264.00

Question 5

correct option A (8) cao	**B1**

Answer: A) 8

Question 6

correct option E (£228.00) cao	**B1**

Answer: E) £228.00

Question 7

correct option B (£396.00) cao	**B1**

Answer: B) £396.00

Question 8

correct option B (22) cao	**B1**

Answer: B) 22

Question 9

correct option C (£96.00) cao	**B1**

Answer: C) £96.00

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