



EP.M107 Negative Numbers in Context

GL ASSESSMENT GL-11PLUS-MATHS · Calculators not allowed · about 55 minutes

Total Marks

Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

1 Which of these numbers is the smallest?

- ☐ A) -3
- ☐ B) 2
- ☐ C) -7
- ☐ D) 0
- ☐ E) 5

(Total for Question 1 is 1 mark)

2 Calculate $-5 + 3$.

(Total for Question 2 is 1 mark)

3 The temperature was -2 degrees Celsius in the early morning. By noon it fell by 5 degrees. Work out the temperature at noon.

(Total for Question 3 is 1 mark)

4 Aisha has £12 in her bank account. She withdraws £30. What is her new balance?

(Total for Question 4 is 1 mark)

5 What is the difference between -4 and 6 ? (Give the distance between the numbers.)

(Total for Question 5 is 1 mark)

6 Order these numbers from smallest to largest: -2, -11, 3, 0, -1

(Total for Question 6 is 2 marks)

7 The temperature in a town is -3 degrees. It rises by 9 degrees, then falls by 15 degrees. Work out the final temperature.

(Total for Question 7 is 2 marks)

8 Sam's bank balance is -£12.

(a) He pays in £20. What is his new balance? (1)

(b) He then withdraws £5. What is the balance now? (1)

(Total for Question 8 is 2 marks)

9 Calculate $-3 - (-8)$.

(Total for Question 9 is 1 mark)

10 What is the difference in temperature between -6 degrees and -14 degrees?

(Total for Question 10 is 1 mark)

11 A weather station records -10 degrees. During the day it warms by 4 degrees and then by a further 7 degrees. What is the temperature at the end of the day?

(Total for Question 11 is 2 marks)

- 12** A pond's temperature is reduced by 5 degrees and becomes -2 degrees. What was the temperature before the reduction?

(Total for Question 12 is 2 marks)

- 13** Which number is larger: -0.5 or -1.0?

- ☐ A) -1.0
- ☐ B) -0.5
- ☐ C) they are equal
- ☐ D) cannot be compared
- ☐ E) 0

(Total for Question 13 is 1 mark)

- 14** Order these numbers from smallest to largest: -1.2, -0.03, 0, 0.5, -0.99

(Total for Question 14 is 2 marks)

- 15** Mia owes £4 and Noah has £7. What is their combined balance?

(Total for Question 15 is 1 mark)

- 16** The highest recorded temperature one day was -2 degrees and the lowest was -9 degrees. What is the temperature range that day?

(Total for Question 16 is 1 mark)

- 17** Complete the sequence: -3, -1, 1, 3, ____.

(Total for Question 17 is 1 mark)

18 A car thermometer shows 5 degrees. It falls by 12 degrees, then rises by 6 degrees. Work out the final temperature.

(Total for Question 18 is 2 marks)

Mark scheme · EP.M107 Negative Numbers in Context

Question 1

- **B1** correct option C (-7) cao
- **Answer: C) -7** (smallest number on the list).

Question 2

- **B1** -2 cao
- **Answer: -2**

Question 3

- **B1** -7 degrees C cao
- **Answer: -7 degrees C**

Question 4

- **B1** -£18 cao
- **Answer: -£18** (an overdraft of £18)

Question 5

- **B1** 10 cao
- **Answer: 10**

Question 6

- **M1** identify smallest and largest correctly oe (smallest = -11, largest = 3)
- **A1** fully correct order: -11, -2, -1, 0, 3 cao
- **Answer: -11, -2, -1, 0, 3**

Question 7

- **M1** correct intermediate step seen ($-3 + 9 = 6$ or equivalent)
- **A1** final answer -9 cao
- **Answer: -9 degrees C**

Question 8

- (a) **B1** £8 cao
- (a) **Answer: £8**
- (b) **B1** £3 cao
- (b) **Answer: £3**

Question 9

- **B1** 5 cao
- **Answer: 5**

Question 10

- **B1** 8 cao
- **Answer: 8**

Question 11

- **M1** correct intermediate step seen ($-10 + 4 = -6$)
- **A1** final answer 1 degree C cao
- **Answer: 1 degree C**

Question 12

- **M1** correct equation or method seen ($x - 5 = -2$ or $x + (-5) = -2$)
- **A1** 3 degrees C cao
- **Answer: 3 degrees C**

Question 13

- **B1** correct option B (-0.5) cao
- **Answer: B) -0.5**

Question 14

- **M1** identify smallest and largest correctly oe (smallest = -1.2, largest = 0.5)
- **A1** fully correct order: -1.2, -0.99, -0.03, 0, 0.5 cao
- **Answer: -1.2, -0.99, -0.03, 0, 0.5**

Question 15

- **B1** £3 cao
- **Answer: £3**

Question 16

- **B1** 7 degrees cao
- **Answer: 7 degrees**

Question 17

- **B1** 5 cao
- **Answer: 5**

Question 18

- **M1** correct intermediate step seen ($5 - 12 = -7$ or equivalent)
- **A1** -1 degree C cao
- **Answer: -1 degree C**