Level 2 Whole Number Ouestions

Level 2 Adult Numeracy questions: Negative numbers (N1)

Allow about 25 minutes.

You may NOT use a calculator. Bilingual dictionaries may be used.

N1/L2.1 Read, write, order and compare positive and negative numbers of any size in a practical context (c) understand the meaning of negative numbers in a practical context, e.g. temperature below zero, loss in trading N1/L2.2 Carry out calculations with numbers of any size using efficient methods. (c) know and use strategies to check answers

Questions 1 to 3 are about temperatures in different parts of the world. This table shows the temperatures for one day in January.

| City | Max °C | Min °C |
|----------|--------|--------|
| Athens | 12 | 5 |
| London | 7 | 0 |
| Moscow | -10 | -16 |
| New York | 1 | - 6 |
| Oslo | -18 | -23 |
| Paris | 6 | -2 |
| Sydney | 29 | 25 |

1. Which city had the lowest temperature?

A London

C Oslo

B New York

D Sydney

2. Which city had the greatest range of temperatures?

A Athens

C Oslo

B Moscow

D Paris

3. What is the difference between the maximum temperature in Sydney and the maximum temperature in Oslo?

A 11°C

C 46°C

B 37°C

D 47°C

4. The table summarises the income and costs of producing a play.

| ITEM | £ |
|--|------|
| Printing costs (tickets, posters, programmes) | 95 |
| Cost of hire of hall (rehearsals and performances) | 125 |
| Cost of hiring lights and costumes | 310 |
| Refreshment sales | 42 |
| Refreshment costs | 18 |
| Ticket sales | 1840 |

Which of these calculations gives the overall **profit**?

$$A \pm (95 + 125 + 310 + 18 - 1840 - 42)$$

$$B \pm (95 + 125 + 310 + 18) - (1840 + 42)$$

$$C \pm (1840 + 42 - 95 + 125 + 310 + 18)$$

D £
$$(1 840 + 42) - (95 + 125 + 310 + 18)$$

Questions 5 to 8 are about the balance sheet for a small business.

A business has a bank balance of £300 in January. The balance sheet for the first 8 months of the year is shown below, but some of the amounts are missing.

Balance Sheet

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug |
|--------------------|------|-----|-----|-----|-----|-----|-----|-----|
| Sales (£) | 256 | 321 | 317 | 352 | | | 528 | 684 |
| Expenses (£) | 421 | 403 | 416 | | 375 | 362 | 372 | |
| Profit or Loss (£) | -165 | -82 | | -49 | 3 | 35 | | 331 |
| Bank Balance (£) | 135 | 53 | -46 | -95 | | -57 | | 430 |

Profit or Loss = Sales - Expenses

| 5. | What | were | the | sales | in | June? |
|----|------|------|-----|-------|----|-------|
|----|------|------|-----|-------|----|-------|

| A £327 | C £397 |
|---------------|---------------|
| B £378 | D £401 |

6. What were the expenses in April?

| A £353 | C £397 |
|---------------|---------------|
| B £378 | D £401 |

7. What was the profit or loss in March?

| A –£99 | C £99 |
|---------------|---------------|
| B –£92 | D £156 |

8. What was the bank balance in July?

| A –£99 | C £99 |
|---------------|---------------|
| B –£92 | D £156 |

9. Maria is doing research into food storage temperatures for her catering course. She finds the following table in a book.

| 8°C | By law, perishable goods for public consumption must not be stored above this temperature. |
|-------|--|
| 5°C | By law, this is the highest temperature for very high risk food in a fridge. |
| 3°C | Ideal temperature for a domestic refrigerator. |
| - 6°C | One star rated freezer (*) |
| -12°C | Two star rated freezer (**) |
| -18°C | Three star rated deep-freeze (***) |

Her domestic refrigerator has a fault and is 4°C higher than the ideal temperature.

What is the difference in temperature between her domestic refrigerator and the three star rated deep-freeze if the deep-freeze is at the correct temperature?

| A 17°C | C 25°C |
|---------------|---------------|
| B 19°C | D 27°C |

Use the information below for questions 10 and 11.

The table shows the latest three-monthly summary of receipts and payments for 'SN Sports'.

| Cash flow in £000s | | | | | | |
|--------------------------|-------|--------|-----------|-------|--|--|
| | July | August | September | Total | | |
| Receipts | | | | | | |
| Cash from sales | 120.3 | 40.5 | 75.2 | 236.0 | | |
| Other income | 9.2 | 4.2 | 5.0 | 18.4 | | |
| Totals | 129.5 | 44.7 | 80.2 | 254.4 | | |
| Payments | | | | | | |
| Materials from suppliers | 50.6 | 27.0 | 70.4 | 148.0 | | |
| Wages and salaries | 13.4 | 15.0 | 13.6 | 42.0 | | |
| Overheads | 23.0 | 11.0 | 12.0 | 51.0 | | |
| Capital expenditure | 5.0 | 8.0 | 2.0 | 15.0 | | |
| Totals | 92.0 | 66.0 | 98.0 | 256.0 | | |

10. Which of these methods are checks for the Total Receipts for the 3 months?

method 1 254.4 - 18.4 = 236.0

method 2 92.0 + 66.0 + 98.0 = 256.0

method 3 120.3 + 40.5 + 75.2 = 236.0

method 4 254.4 - 129.5 - 44.7 = 80.2

A methods 1 and 2 C methods 3 and 4 B methods 2 and 3 D methods 1 and 4

11. Under 'Payments', what level of accuracy has been used in the figures for 'Materials from suppliers'?

A nearest 10p C nearest £100
B nearest £

D nearest £1000

12. The table shows part of an income account for a club. Entries in brackets are negative.

| | | Sub-total | Total |
|----------------|----------|-----------|---------|
| subscriptions | £411.43 | | |
| donations | £29.50 | | |
| net activities | (£37.35) | | |
| | | £402.58 | |
| bank interest | £16.23 | | |
| bank charges | (£17.66) | | |
| | | (£1.43) | |
| Overall total | | | £402.15 |

There is an error in one of the entries. Which entry is wrong?

A £402.58 **C** £402.15

B £1.43 **D** you cannot say

Answers

| _ | 51 5 | | | | | | | |
|---|------|---|---|----|----|----|-------|--|
| | 1 | 2 | 3 | 4 | 5 | 6 | | |
| | | | | | | | | |
| | 7 | 8 | 9 | 10 | 11 | 12 | Total | |
| | | | | | | | | |

Tutor Comments

Answer sheet and teaching notes.

Level 2: Whole numbers (negative numbers).

- 1 **C** Oslo
- 2 **D** Paris
- 3 $D 47^{\circ}C$
- 4 \mathbf{D} £(1 840 + 42) (95 + 125 + 310 + 18)
- 5 **C** £397
- 6 **D** £401
- 7 **A** –£99
- 8 **C** £99
- 9 **C** 25°C
- 10 **D** methods 1 and 4
- 11 C nearest £100
- 12 **A** £402.58

Allow about 20 minutes