1.7 Negative Numbers: 30-minute Pack

Calculators not allowed · about 30 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A shop records a loss of £45 on Monday and a profit of £30 on Tuesday. What is the net change over the two days?

(2)

2 Calculate: (-2) x (-5) + (-3)

(2)

3 A thermometer reads -6 degrees at 6 am. By midday the temperature rises by 9 degrees. By evening it falls by 14 degrees. What is the temperature in the evening?

(3)

4 Sarah owes £28 to a friend. She pays back £10 and then borrows another £6. What is her final balance (negative means she still owes money)?

(3)

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5 Calculate: (-3) x 4 + 5 - (-6)

(3)

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6 Work out

(a) (-5) x 2

(b) -60 ÷ (-6)

(2)

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7 Write these numbers in order, smallest first.

3, -1, 1, 0, -2, 11

(2)

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8 Find the missing number: 11 + ? = 0

(2)

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9 Calculate: -15 / 3

(1)

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10 A lift starts at floor 3. It goes down 7 floors, then up 4 floors, then down 2 floors (floors below ground level are negative). What floor does it end on? Show your working.

(3)

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11 Work out: -6 + 9 - (-3)

(2)

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Mark scheme · 1.7 Negative Numbers: 30-minute Pack

Question 1

correct method: -45 + 30 or equivalent	M1
-£15 (loss) cao	A1

Answer: **-£15**

Question 2

multiply negatives correctly to get 10 then show addition of -3 or equivalent	M1
7 cao	A1

Answer: **7**

Question 3

shows rise: -6 + 9 = 3 or equivalent	M1
shows fall: 3 - 14 = -11 or equivalent sequence	M1
-11 degrees cao	A1

Answer: **-11 degrees**

Question 4

shows paying back: -28 + 10 = -18 or equivalent	M1
shows borrowing again: -18 - 6 or equivalent	M1
-£24 cao	A1

Answer: **-£24**

Question 5

correct multiplication: (-3) x 4 = -12	M1
adds 5 correctly: -12 + 5 = -7	M1
-1 cao (after adding 6 from -(-6))	A1

Answer: **-1**

Question 6

(a) -10	B1
(b) 10	B1

Answer: **(a) -10, (b) 10**

Question 7

at least four numbers in the correct relative order	M1
-2, -1, 0, 1, 3, 11 cao	A1

Answer: **-2, -1, 0, 1, 3, 11**

Question 8

uses the inverse operation or tries a value and checks	M1
-11 cao	A1

Answer: **-11**

Question 9

-5 cao	B1

Answer: **-5**

Question 10

correct first move, 3 - 7 = -4	M1
correctly applies the remaining moves, -4 + 4 - 2	M1
floor -2 (2 floors below ground) cao	A1

Answer: **Floor -2 (2 floors below ground)**

Question 11

correctly rewrites -(-3) as +3	M1
6 cao	A1

Answer: **6**

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