

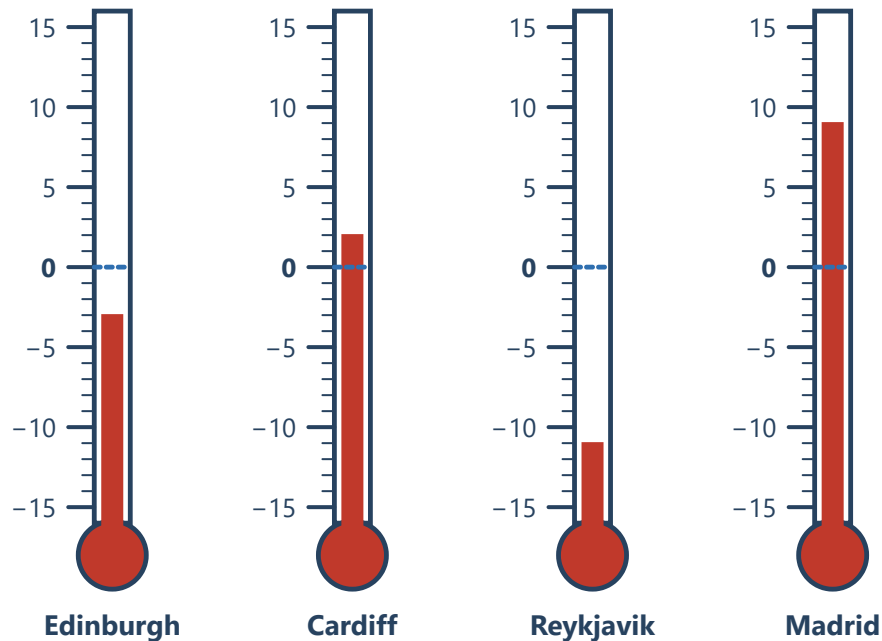
Year 5: Negative numbers: temperatures, depths and bank balances: answers

Year 5 - Place Value to 1,000,000 - Lesson 1.4

Answers. Final answers to the worksheet questions. Full step-by-step solutions for every question are free at websink.site/ks2-sats/maths/year-5/ch01-place-value/negative-numbers-temperatures-depths-and-bank-balances/

Exercise 1D Negative numbers Non-calculator

1 The thermometers show the temperature in four cities one morning.



(a) Which city is the coldest?

Answer: Reykjavik

(b) Which city is the warmest?

Answer: Madrid

(c) How many degrees warmer is Cardiff than Edinburgh?

Answer: 5°C

(d) What is the difference in temperature between Madrid and Reykjavik?

Answer: 20°C

(e) Write the cities in order, coldest first.

Answer: Reykjavik, Edinburgh, Cardiff, Madrid

2 What temperature does the thermometer show?



Answer: -8°C

3 Write the missing numbers in the boxes on the number line.



Answer: $-30, -10, 10, 30$

4 Count on or back. Write the next five numbers each time.

(a) Count back in 3s from 10.

Answer: $7, 4, 1, -2, -5$

(b) Count on in 5s from -22 .

Answer: $-17, -12, -7, -2, 3$

(c) Count back in 10s from 25.

Answer: $15, 5, -5, -15, -25$

(d) Count on in 4s from -18 .

Answer: $-14, -10, -6, -2, 2$

5 Write $<$ or $>$ in each box.

(a) -3 [?] 2

Answer: $-3 < 2$

(b) -17 [?] -7

Answer: $-17 < -7$

(c) $0 \text{ [?] } -1$

Answer: $0 > -1$

(d) $-25 \text{ [?] } -52$

Answer: $-25 > -52$

(e) $-100 \text{ [?] } 10$

Answer: $-100 < 10$

(f) $-6 \text{ [?] } -60$

Answer: $-6 > -60$

6 Write each set of numbers in order.

(a) $-14, 6, -2, -20, 9, 0$ (smallest first)

Answer: $-20, -14, -2, 0, 6, 9$

(b) $-35, -3, -53, 5, 35$ (biggest first)

Answer: $35, 5, -3, -35, -53$

7 What is the new temperature?

(a) It is 6°C . It falls by 11°C .

Answer: -5°C

(b) It is -3°C . It rises by 9°C .

Answer: 6°C

(c) It is -12°C . It rises by 5°C .

Answer: -7°C

(d) It is 4°C . It falls by 15°C .

Answer: -11°C

8 Find the difference between the two temperatures.

(a) -4°C and 9°C

Answer: 13°C

(b) -13°C and -2°C

Answer: 11°C

(c) -21°C and 6°C

Answer: 27°C

(d) 5°C and -17°C

Answer: 22°C

(e) -30°C and -5°C

Answer: 25°C

9 Zainab's bank statement is shown below.

What happened	Money in	Money out	Balance
Opening balance			–£30
Birthday money paid in	£85		£55
Bought a book		£60	–£5
Pocket money paid in	£20		?
Bought a game		£45	?

(a) What is her balance after the pocket money is paid in?

Answer: £15

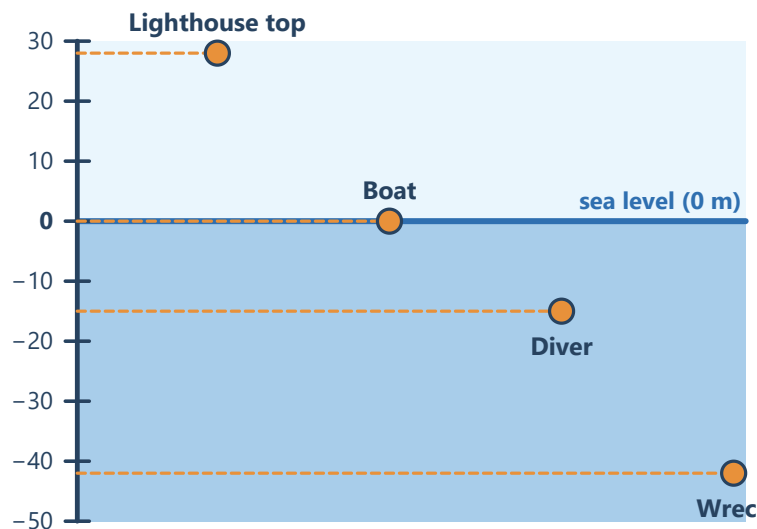
(b) What is her balance after she buys the game?

Answer: –£30

(c) How much must she pay in to get her balance back to £0?

Answer: £30

10 The picture shows a lighthouse, a boat, a diver and a wreck.



(a) How far is the wreck below the boat?

Answer: 42 m

(b) How far is it from the top of the lighthouse to the diver?

Answer: 43 m

(c) The diver dives another 12 m. What is her position now?

Answer: –27 m

11 A building has floors numbered from –2 (the car park) to 8.

(a) A lift starts on floor 5 and goes down 8 floors. Which floor is it on now?

Answer: –3

(b) A cleaner goes from floor -2 up to floor 6. How many floors does she go up?

Answer: 8 floors

12 A freezer at -18°C is switched off. The temperature inside rises by 3°C every hour. After how many hours is it first **above** 0°C ?

Answer: 7 hours

13 At midnight the temperature is -9°C . By 6 a.m. it has risen by 4°C . By noon it has risen by another 11°C . By 6 p.m. it has fallen by 8°C .

(a) What is the temperature at noon?

Answer: 6°C

(b) What is the temperature at 6 p.m.?

Answer: -2°C

(c) What is the difference between the lowest and the highest temperatures of the day?

Answer: 15°C

14 The temperature rises from -6°C to 4°C . Aisha says it has risen by 2°C . What mistake has she made? What is the correct answer?

Answer: 10°C

15 Is this always, sometimes or never true?

"If you take a number away from 5, the answer is positive."

Answer: Sometimes

16 Which one is different? -7°C 7°C below zero minus seven degrees 7°C above zero

Answer: 7°C above zero

17 Two temperatures are 14 degrees apart. One of them is -5°C . What could the other temperature be? Find both answers.

Answer: 9°C or -19°C