

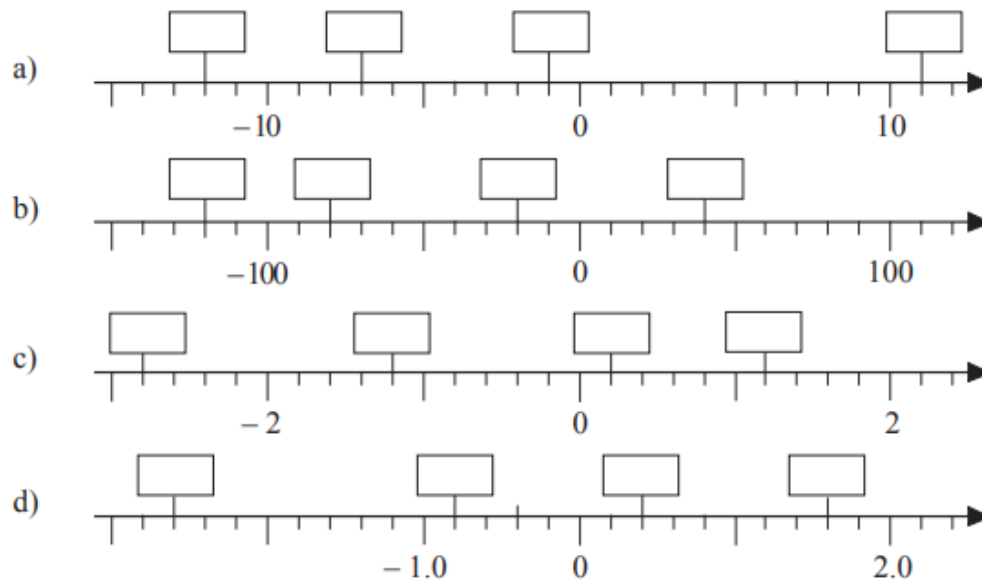
Key words of this chapter:

|            |             |          |
|------------|-------------|----------|
| positive   | negative    | vertical |
| horizontal | number line |          |

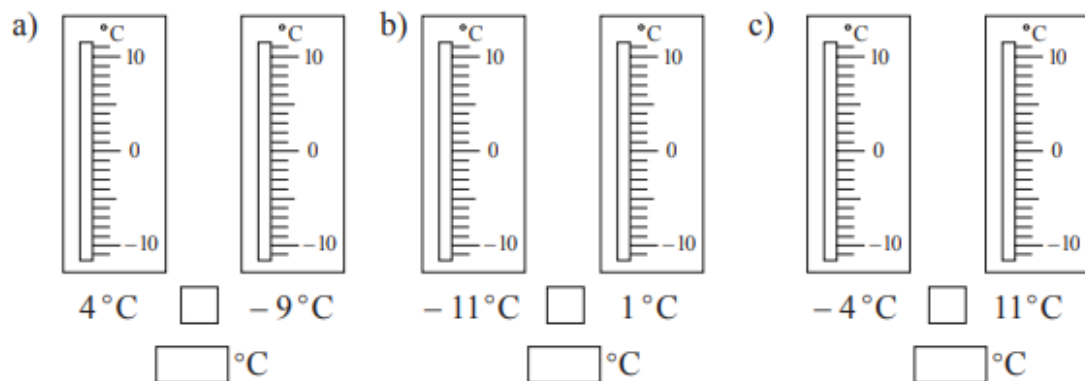
**Practice makes perfect**

For this type of question, be careful about the marked scale on the ruler.

1. Fill in the missing numbers.



2. Colour the temperatures on the thermometers. Fill in the missing items.



“With a number line in your head, you should be very clear that the bigger the number is for a negative number, the further it is from zero, the smaller the value of that number is. For example,  $-100 < -10$ .”

3. Write these temperatures in increasing order.
- a)  $-120^{\circ}\text{C}$ ,  $-31^{\circ}\text{C}$ ,  $-40^{\circ}\text{C}$ ,  $0^{\circ}\text{C}$ ,  $-63^{\circ}\text{C}$ ,  $-2^{\circ}\text{C}$ ,  $-14^{\circ}\text{C}$ ,  $-0.6^{\circ}\text{C}$
- .....

- b)  $65^{\circ}\text{C}$ ,  $-1^{\circ}\text{C}$ ,  $-8^{\circ}\text{C}$ ,  $6000^{\circ}\text{C}$ ,  $-19^{\circ}\text{C}$ ,  $0^{\circ}\text{C}$ ,  $3^{\circ}\text{C}$ ,  $-1.5^{\circ}\text{C}$
- .....

4. Write these heights above *sea level* in decreasing order.

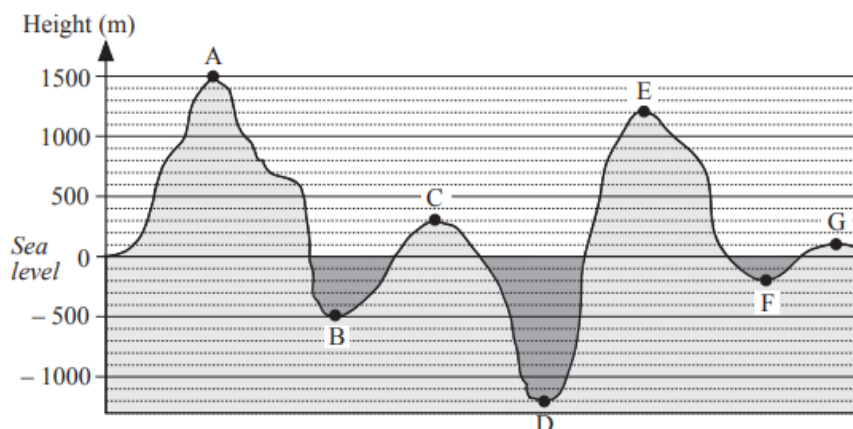
- a) 147 m, 245 m,  $-212$  m,  $-348$  m, 127 m, 101 m,  $-113$  m, 315 m
- .....

- b) 1.2 km,  $-0.6$  km, 4.5 km, 0.3 km,  $-1.5$  km,  $-2.3$  km, 2.5 km
- .....

5. Complete the sentences.

- a) The greater of two positive numbers is the one which is .....  
..... zero.
- b) The greater of two negative numbers is the one which is nearer .....
- c) Any ..... number is greater than any ..... number.

6. Read the heights of the mountains and the depths of the bottom of the sea from this geographical cross-section and write them in the boxes. *Sea level* is 0 m.



A:  m    B:  m    C:  m    D:  m

E:  m    F:  m    G:  m

Write the heights in decreasing order.

.....

“When you are getting more and more familiar with positive and negative numbers, you do not need a number line on the paper, just imagine one in your mind. For example:

$$5 - 8 = ?$$

Imagine a number line in your brain, you are moving 8 units to the left from 5. Thus, you are going to get across 0 on the number line. That means:

1. You go 5 units to the left then you arrive zero.
2. You go another 3 units to the left, then you end up at  $-3$ .”

16. Follow the example. Complete the sentences. Use the number line to help you.

- a)  $8^{\circ}\text{C}$  is greater than  $3^{\circ}\text{C}$  by  $5^{\circ}\text{C}$ .       $8 - 3 = 5$ ,       $5 + 3 = 8$
- b)  $3^{\circ}\text{C}$  is  than  $8^{\circ}\text{C}$  by  $5^{\circ}\text{C}$ .       $3 - 8 = \text{}$ ,       +  $8 = 3$
- c)  $8^{\circ}\text{C}$  is greater than  $0^{\circ}\text{C}$  by .       $8 - 0 = \text{}$ ,       +  $0 = 8$
- d)  $3^{\circ}\text{C}$  is greater than  $-2^{\circ}\text{C}$  by .       $3 - (-2) = \text{}$ ,       +  $(-2) = 3$
- e)  $-2^{\circ}\text{C}$  is less than  $3^{\circ}\text{C}$  by .       $-2 - 3 = \text{}$ ,       +  $3 = -2$
- f)  $-2^{\circ}\text{C}$  is  than  $-5^{\circ}\text{C}$  by  $3^{\circ}\text{C}$ .       $-2 - (-5) = \text{}$ ,       +  $(-5) = -2$

17. When Jenny went on holiday to Finland, the temperature was  $18^{\circ}\text{C}$  colder than in England. If the temperature in Jenny's town was  $15^{\circ}\text{C}$  when she left, what was the temperature when she arrived in Finland?

Answer: .....