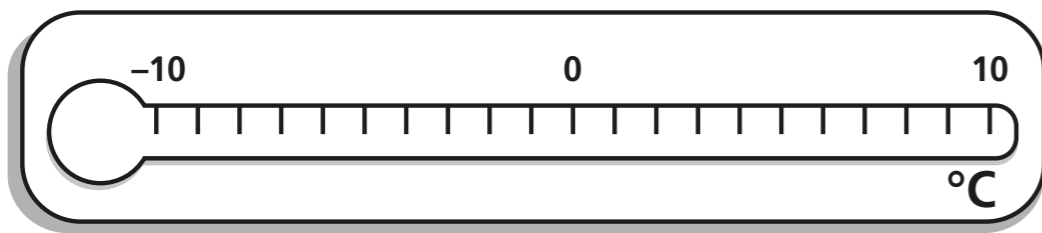# Order directed numbers using lines and appropriate symbols

1 a) Mark where these temperatures are on the thermometer.

−8°C   **7°C**   **2°C**   **−5°C**
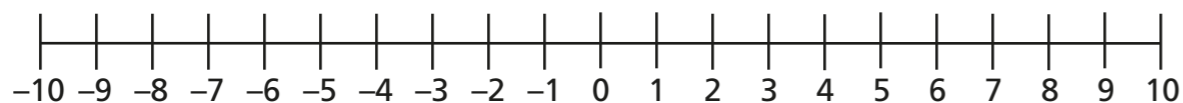
−10   0   10

°C

b) Write the temperatures in order from hottest to coldest.

7°C,   2°C,   −5°C,   −8°C

2 Write <, > or = to complete the statements.

You may use the number line to help you.

−10 −9 −8 −7 −6 −5 −4 −3 −2 −1 0 1 2 3 4 5 6 7 8 9 10

a) −1 < 1

b) 2 > −2

c) 4 > −5

d) −4 < 5

e) −6 > −7

f) −6 < 7

g) 0 > −8

h) −18 < −8

i) −26 > −226

j) −26 < 22

3 Write these numbers in ascending order.

−772   −77   277   −727   −72   727

−772,   −727,   −77,   −72,   277,   727

Compare methods with a partner.

4 Here is part of a number line.

A   B   C

−20   0   20

a) Write three numbers greater than B but less than C.
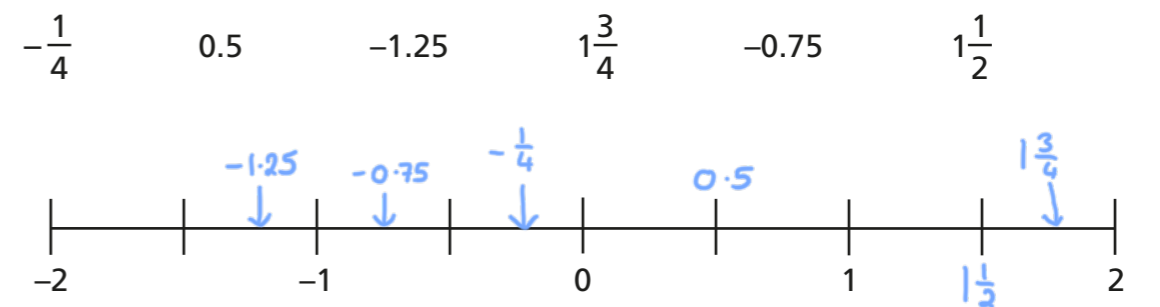
e.g. 6 , 11 , 13

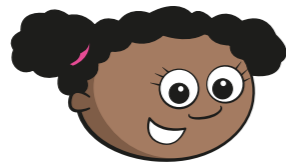**b)** Write three numbers between −20 and A.

e.g. −19 , −16 , −11

c) Write three numbers less than zero but greater than A.

e.g. −9 , −5 , −1

5 Label these numbers on the number line.

$-\frac{1}{4}$ 0.5   −1.25 $1\frac{3}{4}$ −0.75 $1\frac{1}{2}$

−1.25   −0.75 $-\frac{1}{4}$ 0.5 $1\frac{3}{4}$

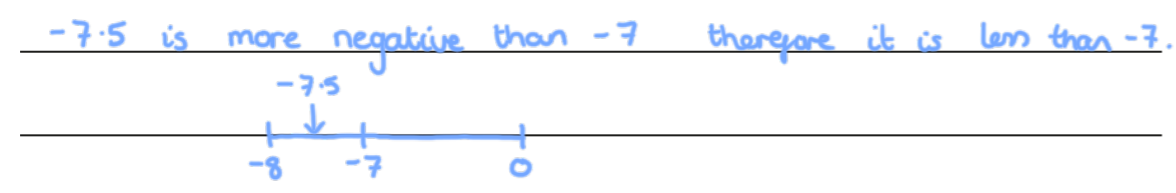−2   −1   0   1 $1\frac{1}{2}$ 2

6

−7.5 is greater than −7 as 7.5 is more than 7

Explain why Whitney is incorrect.

You could use a number line to help you explain.

−7.5 is more negative than −7 therefore it is less than −7.

−7.5 ↓
−8   −7   0

7 Here are five numbers.

| −200 | −200.2 | 0 | 0.2 | −20 |

a) Which number is the greatest?

0·2

b) Which number is the smallest?

−200·2

8 Write < or > to complete the statements.

a) −2.4 ⓒ< −2   2.4 ⓒ> −2   −2.4 ⓒ< 2

b) 17.25 ⓒ> −17.05   −17.25 ⓒ< −17.05   −17.25 ⓒ< 17.05

c) −101.3 ⓒ< 101.31   101.3 ⓒ> −101.31   −101.3 ⓒ> −101.31

9 Five numbers are written in ascending order.

| −7 | −4 | −3 | | 7 |

What could the 4th number be? Can you find more than one answer?

e.g. −2

Compare answers with a partner.

10 Write the missing digits to make the statements correct.

various answers e.g.

a) −7.5 > −7.**5**5

−7.5 < −7.**4**5

b) −6**1**.**4** < −**5**1.23

−6**1**.**1** > −**6**1.23

c) −7.3**0** < −7.**2**3 < −**6**.37 < −6.**1**3 < −**5**.7**2**

How many different answers can you find?

11 The table shows the melting points of some elements.

Element	Melting point (°C)
Fluorine	−219.6
Neon	−248.59
Sodium	97.72
Magnesium	650
Hydrogen	−259.14
Boron	2,075
Carbon	3,550
Nitrogen	−210.1
Oxygen	−218.3

a) Which element has the lowest melting point?   Hydrogen

b) Write the elements in order, from lowest melting point to highest melting point.

Hydrogen, Neon, Fluorine, Oxygen, Nitrogen, Sodium, Magnesium, Boron, Carbon