

# Directed numbers

12 min  
11 marks

1. On a winter's day in Lesotho the maximum temperature was  $-3^{\circ}\text{C}$ .  
The minimum temperature was  $9^{\circ}\text{C}$  lower than this.  
Write down the minimum temperature.

*Answer* .....  $^{\circ}\text{C}$

[1]

2. In May, the average temperature in Kiev was  $12^{\circ}\text{C}$ .  
In February, the average temperature was  $26^{\circ}\text{C}$  lower than in May.  
What was the average temperature in February?

*Answer* .....  $^{\circ}\text{C}$

[1]

3. The temperature at noon at an Antarctic weather centre was  $-15^{\circ}\text{C}$ .  
At midnight it had fallen by  $12^{\circ}\text{C}$ .  
What was the temperature at midnight?

*Answer* .....  $^{\circ}\text{C}$

[1]

4. At noon one day the temperature is  $-9.5^{\circ}\text{C}$ .  
By midnight the temperature has fallen by  $3.6^{\circ}\text{C}$ .  
What is the temperature at midnight?

Answer .....  $^{\circ}\text{C}$

[1]

5. The table below shows the average monthly temperatures ( $^{\circ}\text{C}$ ) in the Islas Orcadas, Argentina.

Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1	1	0.5	-1	-5	-8	-9	-8	-5	-3	-1	0.5

- (a) Work out the difference between the highest and the lowest average monthly temperature.

Answer (a) .....  $^{\circ}\text{C}$

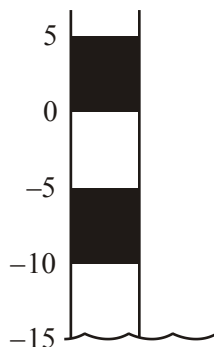
[1]

- (b) The highest recorded temperature for July is  $x^{\circ}\text{C}$ .  
This is  $21^{\circ}\text{C}$  above the average for July shown in the table.  
Work out the value of  $x$ .

Answer (b)  $x =$  .....

[1]

6. On 1st August the level of water in a lake was  $-15$  metres.  
A month later the level was 2 metres higher.  
Write down the new level of water.



Answer ..... m

[1]

7. The table gives the average surface temperature ( $^{\circ}\text{C}$ ) on the following planets.

Planet	Earth	Mercury	Neptune	Pluto	Saturn	Uranus
Average temperature	15	350	-220	-240	-180	-200

(a) Calculate the range of these temperatures.

*Answer (a)* .....  $^{\circ}\text{C}$

[1]

(b) Which planet has a temperature  $20^{\circ}\text{C}$  lower than that of Uranus?

*Answer (b)* .....

[1]

8. The average temperatures in Moscow for each month are shown in the table below.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Temperature $^{\circ}\text{C}$	-10.2	-8.9	-4.0	4.5	12.2	16.3	18.5	16.6	10.9	4.3	-2.0	-7.5

(a) Which month has the lowest average temperature?

*Answer (a)* .....

[1]

(b) Find the difference between the average temperatures in July and December.

*Answer (b)* .....  $^{\circ}\text{C}$

[1]