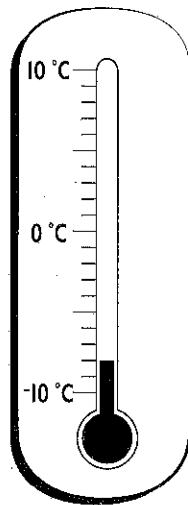
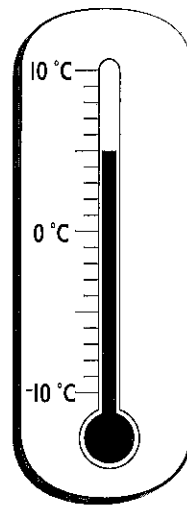


Positive numbers

Two thermometers show the temperatures in two cities.



Aberdeen



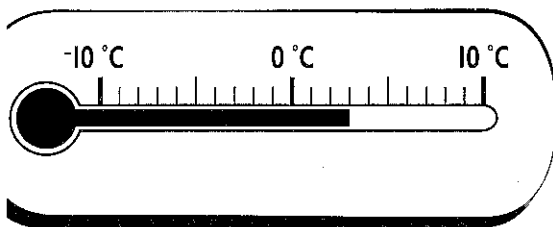
London

What is the temperature in Aberdeen? °C

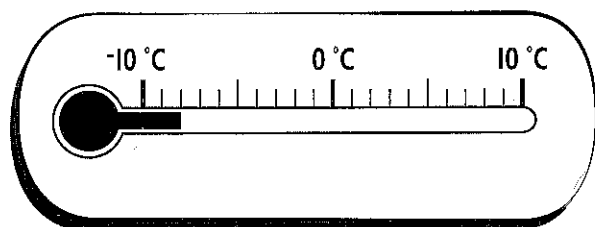
What is the temperature in London? °C

How many degrees warmer is it in London than in Aberdeen? °C

Two thermometers show the temperatures inside Max's fridge and freezer.



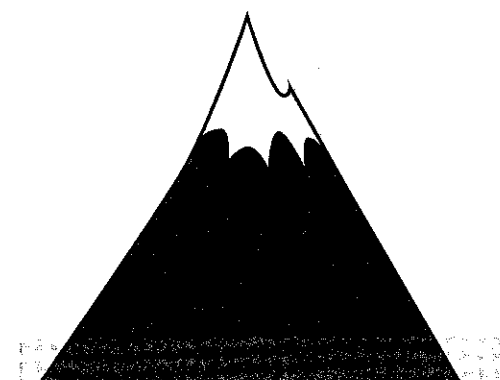
Fridge



Freezer

How much colder is the temperature in the freezer than in the fridge?

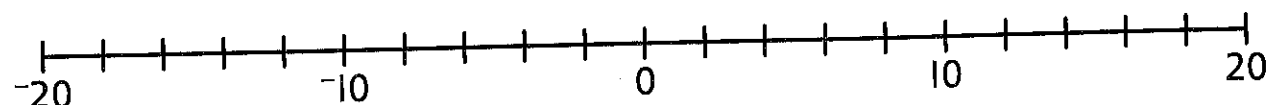
The temperature in the freezer is °C colder than in the fridge.


CHALLENGE


- 3 The table shows the temperatures in four cities around the world.

Calgary	Dubai	Moscow	Istanbul
-13 °C	19 °C	-5 °C	4 °C

- a) Mark the temperature in each city on the number line.



- b) How many degrees warmer is Istanbul than Calgary? °C

- c) Put the temperatures in order, starting with the coldest.

Coldest °C, °C, °C, °C Warmest

- d) During the night, the temperature in Istanbul falls by 8 °C.

What is the temperature during the night? °C

- 4 Toshi goes from floor 12 to floor -3.

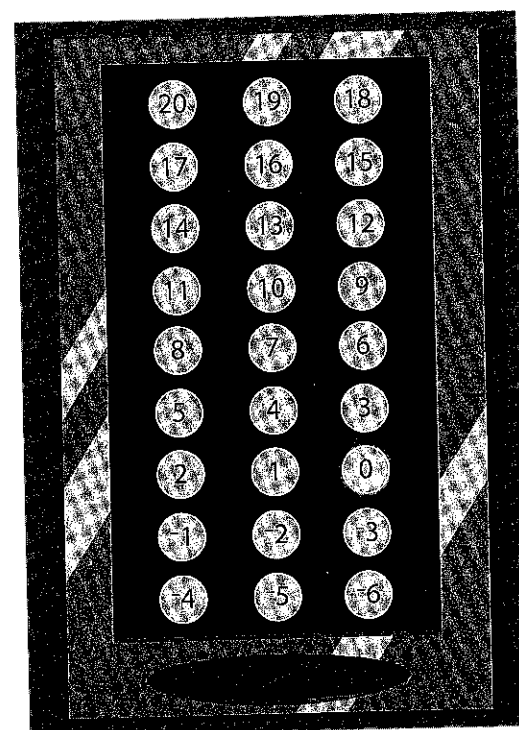
- a) How many floors does Toshi travel?

Toshi travels down floors.

- b) Holly travels up 8 floors from floor -1.

Which floor is Holly on now?

Holly is now on floor .



- 5 The base of a mountain lies 300 metres below sea level.

The top of the mountain is 2,000 metres above sea level.

How tall is the mountain from base to top?

The mountain is metres tall.

- 6 The top of an iceberg is 12 metres above sea level.

The depth of the iceberg below sea level is 8 times the height of the iceberg above sea level.

How tall is the iceberg in total?

The iceberg is metres tall in total.

Reflect

Write two sentences that describe the temperature through the day.



LONDON

06:00 am -7 °C

10:00 am -1 °C

02:00 pm 12 °C






06:00 pm 4 °C

10:00 pm -2 °C



Counting in 10s, 100s, 1,000s, 10,000s

1 Bella makes a number on a place value grid.

HTh	TTh	Th	H	T	O
					

a) What number has Bella made?

b) What is 10,000 more than Bella's number?

c) Bella adds a 100s counter to the place value grid.

What number has Bella made now?

d) Bella removes a 10,000s counter from the place value grid.

What number does Bella have now?

2 Complete these sequences by adding the missing numbers.

a) 140,000, 150,000, 160,000, , ,
,

b) 96,000, , 98,000, 99,000, ,
,

c) , 760,500, 760,600, , ,
760,900,

3 Complete these sequences by adding the missing numbers.

a) 108,150, 208,150, , , , 608,150,

b) 535,420, 545,420, , , ,

c) 751,087, , , 751,117, ,

4 Complete the sequence in three ways.

_____, _____, _____, _____, 720,000, _____
_____, _____, _____, _____, 720,000, _____
_____, _____, _____, _____, 720,000, _____

5 Complete the table below for the number 795,104.

100,000 less		100,000 more	
10,000 less		10,000 more	
1,000 less		1,000 more	
100 less		100 more	
10 less		10 more	

6 Complete the following sentences.

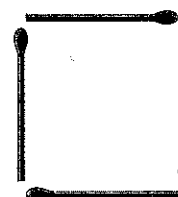
a) 100,000 more than 777,777 is .

b) 10,000 less than 444,444 is .

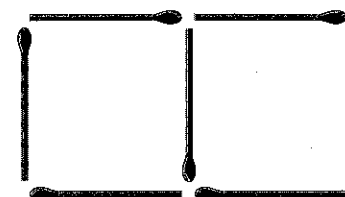
c) 1,000 more than 555,555 is .

Number sequences

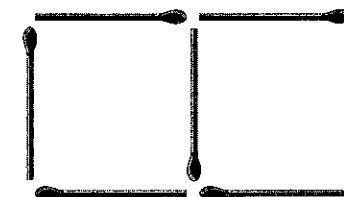
1 Max makes some patterns using matchsticks.



Pattern 1



Pattern 2



Pattern 3

- Complete pattern 3.
- Complete the table to show the number of matchsticks for each pattern.

Pattern number	1	2	3	4	5
Number of matchsticks					

- How many matchsticks are needed to make pattern 7?
Explain how you worked out your answer.

2 Richard is saying a sequence.

He has made a mistake.

What mistake has Richard made?



Richard

11, 15, 19, 22,
26, 30, ...



CHALLENGE

8 Here is some information about three number cards, labelled A, B and C.

- A is 100,000 more than B.
- C is 10,000 more than B.
- C is 1,000 less than 37,928.

Use all of the information to work out the values of A, B and C.

A = B = C =



Reflect

Will it take longer to count in 100s from 100,000 to 200,000 or to count in 10,000s? Explain your answer.



3 What are the next two terms in each of these sequences?

a) 11, 14, 17, 20, ,

f) 200, 175, 150, ,

b) 3, 5, 7, 9, ,

g) 22, 17, 12, ,

c) 11, 15, 19, ,

h) -9, 1, 11, ,

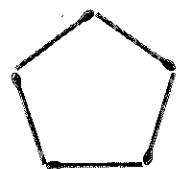
d) 20, 16, 12, 8, ,

i) -2, 1, 4, ,

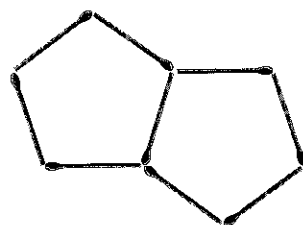
e) 7, 13, 19, 25, ,

j) 16, 10, 4, ,

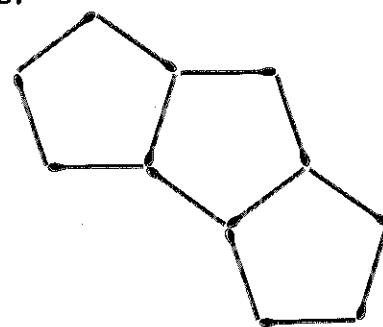
4 Max makes a sequence using matchsticks.



Pattern 1



Pattern 2



Pattern 3

How many matchsticks does he need to make pattern 10?

Max needs matchsticks for pattern 10.

5 A sequence of numbers starts:

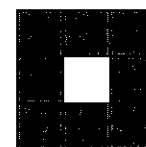


15, 24, 33, 42, 51, ...

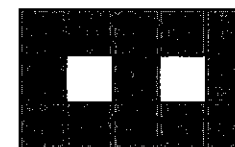
What is the first number above 200 in the sequence?

6 A sequence of patterns is made up of grey and white squares.

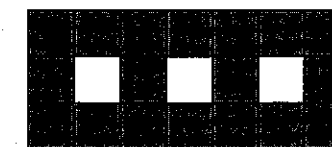
CHALLENGE



Pattern 1



Pattern 2



Pattern 3

One of the patterns has 9 white squares.

How many grey squares does the pattern have?



The pattern has grey squares.

Reflect

Write your own sequence of numbers like the ones you have seen in this lesson.
Describe your sequence.



End of unit check

My journal

1

1

3

5

6

8

9

Look at the six digit cards. Use all of the digit cards each time to make the following:

A number between 250,000 and 350,000.	
A number that has a smaller number of 100s than 10,000s.	
The greatest even number that can be made.	
A number that rounds to 600,000 to the nearest 100,000.	
The smallest number that rounds to 600,000 to the nearest 100,000.	
The number that is 10,000 less than 875,913.	

Find more than one answer if you can.

Power check

How do you feel about your work in this unit?



Power puzzle

Zac makes two number sequences using some number cards.

The sequences have different amounts of terms.

One sequence goes up by the same amount each time.

One sequence goes down by the same amount each time.

8

-4

14

4

10

7

2

1

20

13

6

He mixes the sequences up.

Work out the two sequences.

Now make two of your own sequences.

Mix up the numbers in your sequences.
See if your friend can work out your sequences.

