

# Rounding numbers

- 1 Olivia represents the number 13,672 on a place value grid.

TTh	Th	H	T	O
●	●●●	●●●●● ●	●●●●● ●●	●●

- a) Olivia says that to round the number to the nearest 1,000 she needs to look at the thousands column. Is Olivia correct? Explain your answer.

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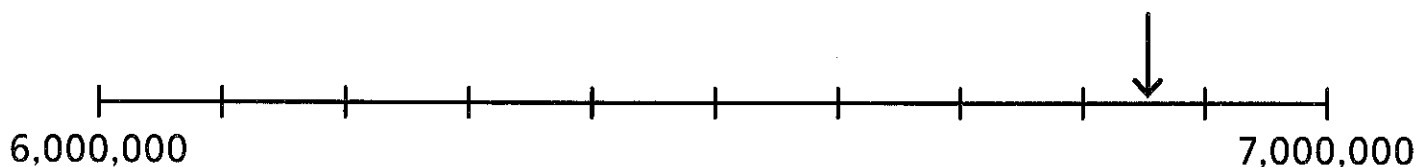
- b) Complete the sentences.

13,672 rounded to the nearest 1,000 is .

13,672 rounded to the nearest 100 is .

- 2 The arrow points to a number on the number line.

Round the number to the nearest 1,000,000. Explain your answer.



The number rounds to  because \_\_\_\_\_

\_\_\_\_\_

- 3 a) 137,987 rounded to the nearest 100,000 is  .  
 147,987 rounded to the nearest 100,000 is  .  
 157,987 rounded to the nearest 100,000 is  .  
 167,987 rounded to the nearest 100,000 is  .
- b) 57,390 rounded to the nearest 10,000 is  .  
 57,480 rounded to the nearest 10,000 is  .  
 57,590 rounded to the nearest 10,000 is  .  
 57,690 rounded to the nearest 10,000 is  .

- 4 Complete the table.

Rounded to the nearest	128,381	1,565,900	72,308
100,000			
10,000			
1,000			
100			
10			

- 5 Circle the numbers that round to 17,000 to the nearest 1,000.

17,450	17,399	16,500	17,500
16,790	16,099	16,999	17,098

6  1  2  5  6  9

Use the digit cards to make a number that:

- a) rounds to 15,700 to the nearest 100  .  
 b) rounds to 60,000 to the nearest 10,000  .  
 c) rounds to 60,000 to the nearest 1,000.  .

- 7 Complete the sentences.

- a) 3,607 rounded to the nearest \_\_\_\_\_ is 3,610.  
 b) 11,53  rounded to the nearest 100 is 11,500.  
 c) 25,497 rounded to the nearest \_\_\_\_\_ and \_\_\_\_\_ is  .  
 d) 25,  97 rounded to the nearest 10, 100 and 1,000 is  .

CHALLENGE

## Reflect

15,782 rounds to 16,000 to the nearest 1,000: true or false? Explain in two different ways how you know.

- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_

# Negative numbers

- 1 The table shows the temperature in three places in the UK.

Fort William	Leeds	Swansea
$-6^{\circ}\text{C}$	$-3^{\circ}\text{C}$	$7^{\circ}\text{C}$

- a) The temperature in Fort William increases by  $7^{\circ}\text{C}$ .

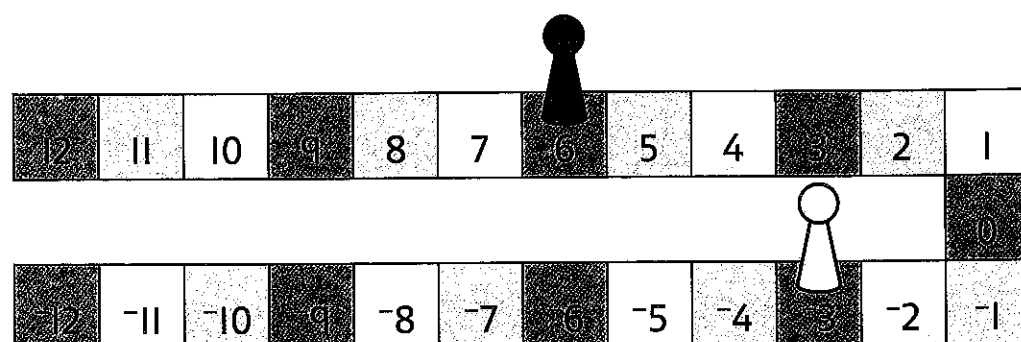
What is the new temperature?

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

- b) How much colder is the temperature in Leeds than in Swansea?

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

- 2 Isla and Mo are playing a game. Isla is on  $-3$  and Mo is on 6.



Mo moves back 7 places. Isla moves forward 10 places.

How many places ahead of Mo is Isla now?

places

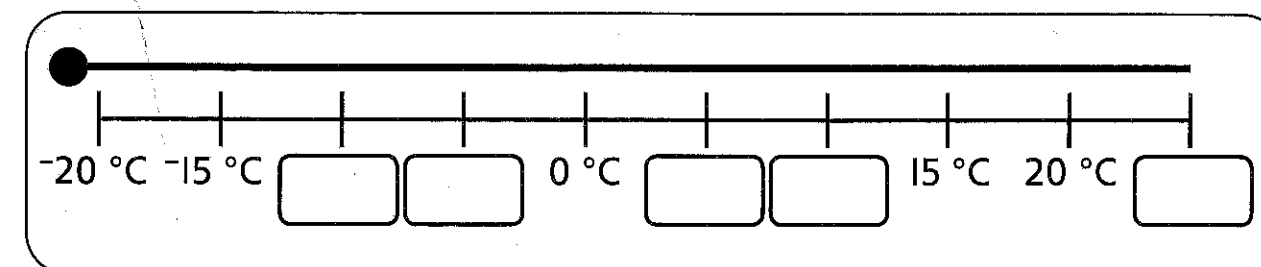
- 3 A pipe is 24 metres below ground. A crane lifts the pipe 38 metres upwards.

How many metres above the ground is the pipe now?

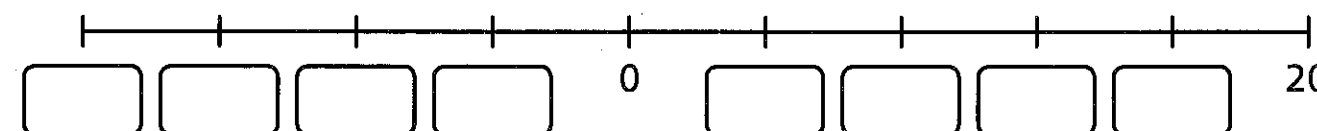
metres

- 4 Complete the number lines.

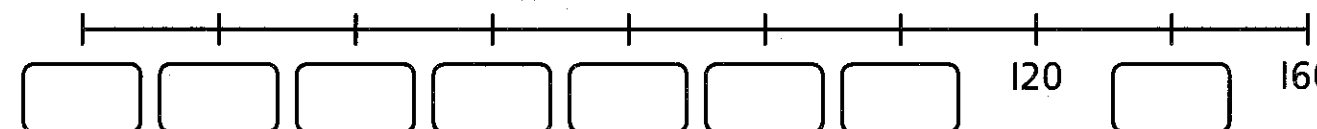
a)



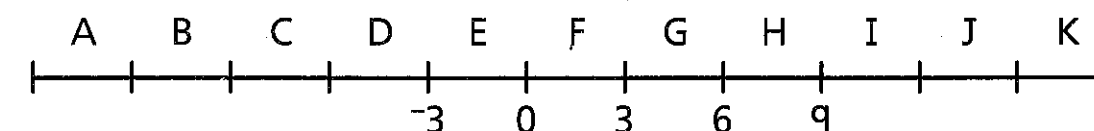
b)



c)



- 5 A number line is divided into sections.



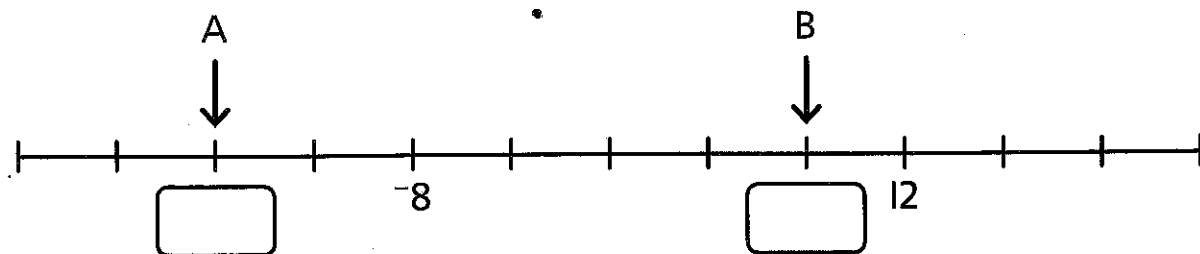
- a) In which section will each of these numbers appear?

7 \_\_\_\_\_ 11 \_\_\_\_\_  $-5$  \_\_\_\_\_

$17.5$  \_\_\_\_\_  $-3\frac{1}{2}$  \_\_\_\_\_  $-11.1$  \_\_\_\_\_

- b) Write down three numbers that will appear in section B.

- 6 What are the values of A and B?



7



CHALLENGE

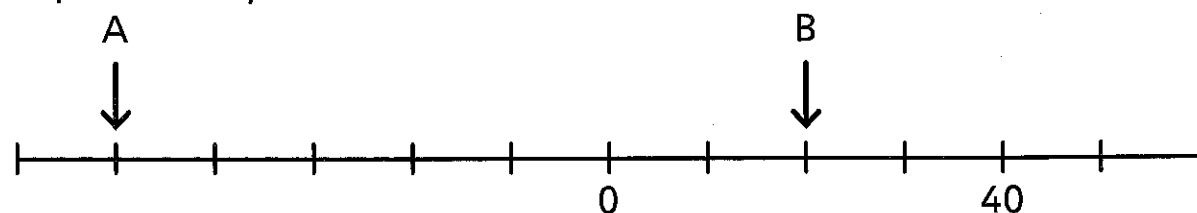
- a) The difference between X and Y is 100.

What is the difference between X and Z?

- b) If 0 lies half-way between X and Y, what is the value of Z?

## Reflect

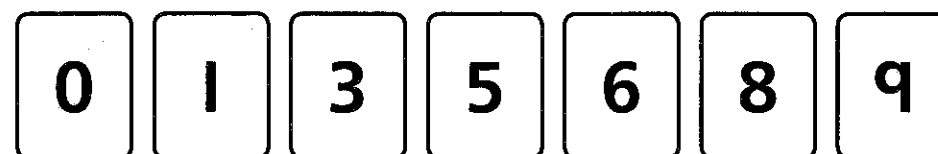
Explain how you can work out the values of A and B.



## End of unit check

### My journal

- 1 Use some or all of the digit cards to make numbers that match the statements below.



An even number that lies between 120,000 and 160,000.

A number that has 3 more 100s than 10,000s.

A number that is 10,000 more than 50,389.

The greatest number less than seven million that you can make.

A number that rounds to 9,000,000 to the nearest 1,000,000.

### Power check

How do you feel about your work in this unit?



## Power puzzle

Use the clues below to work out what 7-digit number to write on the cards.

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- All of the digits are different.
- The number is odd.
- The number is greater than 5 million but less than 7 million.
- The 1,000,000s digit is 4 more than the 100s digit.
- The number is not a multiple of 5.
- The sum of the first three digits is equal to the sum of the last three digits.
- The digit in the 10s column is 4 times the digit in the 100,000s column.
- The digit in the 10,000s column is 3 times the digit in the 1,000s column.

Try making up your own number puzzles like this to challenge your partner. Write clues about 4-digit, 5-digit and 6-digit numbers.



## Problem solving – using written methods of addition and subtraction 1

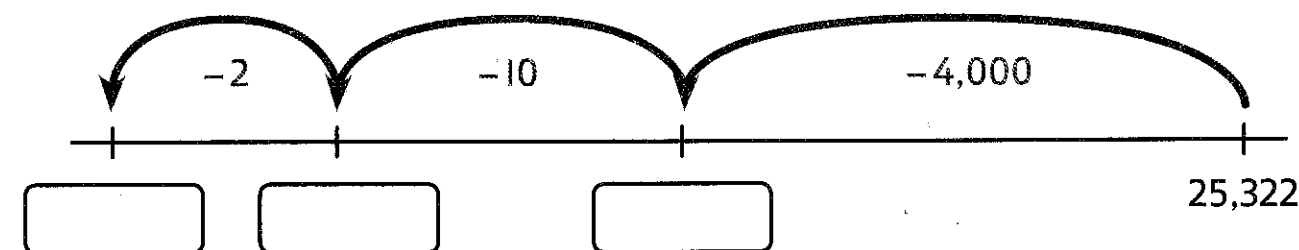
1 Work out the addition.

$$3,214 + 564 = \boxed{\phantom{0000}}$$

Th	H	T	O
● ● ●	● ●	10	1 1 1 1
	● ● ● ● ●	10 10 10 10 10 10	1 1 1 1

Th	H	T	O

2 What calculation is shown on the number line?



$$\boxed{\phantom{000}} \bigcirc \boxed{\phantom{000}} = \boxed{\phantom{0000}}$$

3 Solve these calculations.

a)  $101,573 - 100,432 = \boxed{\phantom{00000}}$

HTh	TTh	Th	H	T	O

b)  $\boxed{\phantom{000000}} = 234,501 + 40,078$

HTh	TTh	Th	H	T	O

- 4 A pilot flew 2,438 km on Monday and then 1,330 km on Tuesday.

a) How much further did she fly on Monday than on Tuesday?



b) On Wednesday, the pilot flew 227 km less than on Monday. How far did she fly on Monday, Tuesday and Wednesday in total?



- 5 Max is doing a column subtraction. What two mistakes has he made? What is the correct answer?

TTh	Th	H	T	O
2	5	3	9	9
-	2	3	5	1
0	3	6	4	8

- 6 Fill in the missing numbers.

TTh	Th	H	T	O
3	9		2	5
-		3		1
2	1	0	2	

TTh	Th	H	T	O
1		0	1	
2	4	0	1	4
+	1		2	4
9	6	0		9

- 7 Work out the missing numbers.

a) 9,999,999 -  = 909,090



b)  - 919,293 = 50,206



CHALLENGE

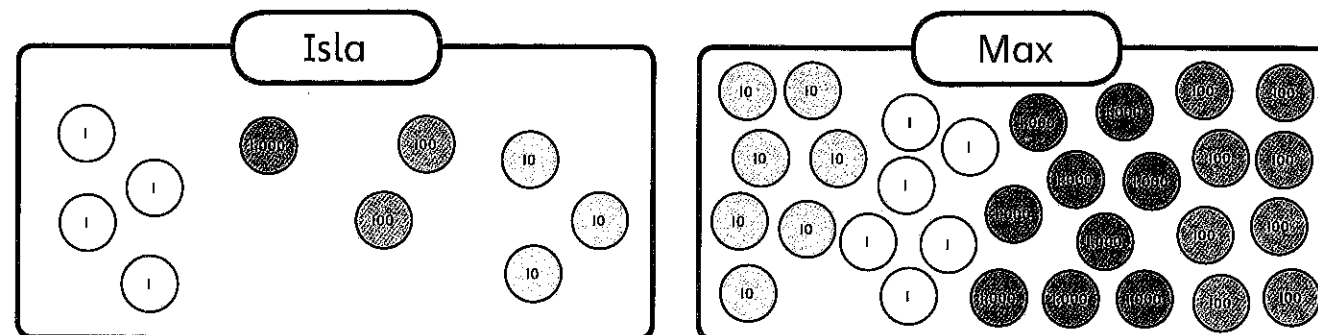
## Reflect

Write a story problem for the calculation  $74,505 - \square = 21,200$ .



# Problem solving – using written methods of addition and subtraction 2

- 1 Isla and Max use counters to represent different numbers.



- a) Reena makes the number 14,321. How much bigger is Reena's number than Isla's number?

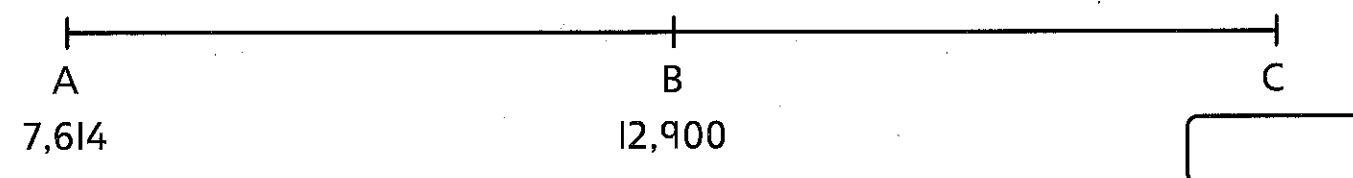
- b) How much bigger is Reena's number than Max's number and Isla's number combined?

- c) Subtract 909 from each of the three numbers.

- 2 The Second World War ended in 1945. It started in 1939. How many years did the war last for?

Show an efficient method for working out the answer to this subtraction.

- 3 These numbers are on a number line. B lies half-way between A and C. What is the sum of A, B and C?



- 4 Solve these subtractions.


a)  $4,321 - 1,234 =$

b)  $7,654,321 - 1,234,567 =$


## CHALLENGE

- 5 Amelia scored 29,750 fewer points than Bella. Bella scored 15,200 points, then 21,500 points.

How many points did they score altogether?

Amelia  

Bella



## Reflect

To work out  $5,000 - 1,728$ , you can do  $4,999 - 1,727$ . Explain why.

Use a similar method to work out  $50,000 - 26,304$ .

☐ \_\_\_\_\_

☐ \_\_\_\_\_


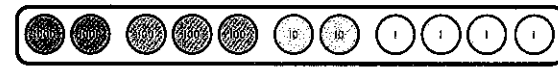
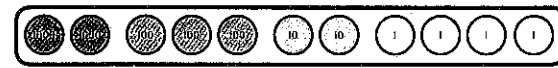
☐ \_\_\_\_\_

☐ \_\_\_\_\_

# Multiplying numbers up to 4 digits by a 1-digit number

- 1 Complete the multiplications. Use a different method for each one.

a)  $3 \times 2,324 =$

	$2\ 3\ 2\ 4$
	$2\ 3\ 2\ 4$
	$+ 2\ 3\ 2\ 4$
	<hr/>

b)  $2,153 \times 5 =$

	2,000	100	50	3
5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

c)  $5,203 \times 6 =$

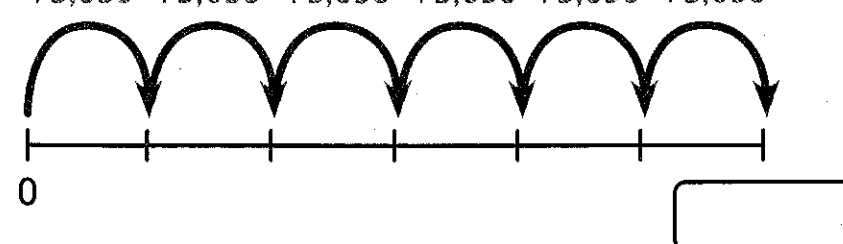
	5	2	0	3
$\times$				6
	<hr/>			
	<hr/>			

d)  $7 \times 1,593 =$

$\times$	<hr/>
	<hr/>

- 2 Calculate the final number on the number line.

$+3,050 +3,050 +3,050 +3,050 +3,050 +3,050$



$\times$