

Wednesday

Power Up

Use the thermometer like a number line to help you answer the questions.

It is 4 degrees. The temperature drops by 6 degrees.
What is the new temperature?

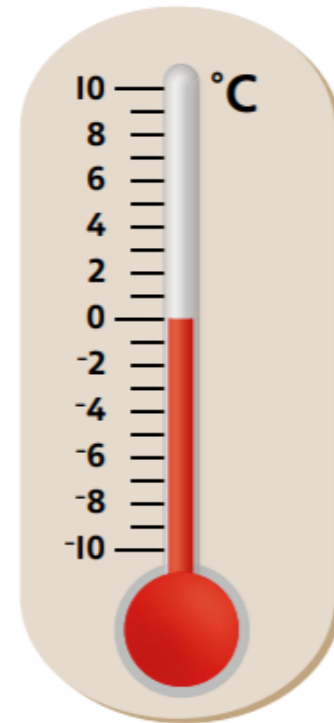
It is 10 degrees. The temperature drops by 14 degrees.
What is the new temperature?

It is -4 degrees. The temperature rises by 8 degrees.
What is the new temperature?

What is the difference between -6 degrees and 2 degrees?

Write the temperature calculations as number sentences.

Write a temperature calculation for your partner to answer.



Checking strategies

Discover



- 1 a) How can the astronaut check her calculation?
- b) Show two ways to do the calculation.

Share

- a) A subtraction can be checked by using the inverse operation, which is addition.

I will use the fact family to check by adding the parts.



I could also check by estimating.



1,225	
799	574

	Th	H	T	O
	7	9	9	
+	5	7	4	
	1	3	7	3

The parts do not match the whole. The calculation should be done again.

I found an easier way.

b)	<table> <thead> <tr> <th>Th</th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>12</td> <td>15</td> <td></td> </tr> <tr> <td>-</td> <td>7</td> <td>9</td> <td>9</td> </tr> <tr> <td></td> <td>4</td> <td>2</td> <td>6</td> </tr> </tbody> </table>	Th	H	T	O	12	12	15		-	7	9	9		4	2	6	<table> <thead> <tr> <th>Th</th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>2</td> <td>2</td> <td>6</td> </tr> <tr> <td>-</td> <td>8</td> <td>0</td> <td>0</td> </tr> <tr> <td></td> <td>4</td> <td>2</td> <td>6</td> </tr> </tbody> </table>	Th	H	T	O	12	2	2	6	-	8	0	0		4	2	6
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12	2	2	6																															
-	8	0	0																															
	4	2	6																															

There are 426 l of fuel left.



Think together

- 1 The mass of the food has to be calculated accurately. Check the calculation using the inverse operation.

6,995 g of food at start of voyage.
3,288 g eaten so far.
 $6,995 - 3,288 = 3,707$



$$\square + \square = \square$$

The parts **do** / **do not** match the whole.

The calculation **is** / **is not** correct.

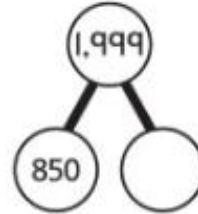
- 2 Write a calculation to check each of these.

a) $199 + 3,401 = 5,391$

b) $9,009 - 440 = 8,569$

Complete any corrections that are needed.

- 3 Complete the part-whole model, and then write the four facts in the fact family.



- 4 Use a part-whole model or a bar model to show these missing number calculations.

$$1,090 + \square = 3,000$$

$$4,000 - \square = 1,250$$

$$2,550 = \square + 1,850$$

$$\square - 750 = 2,000$$

Now choose a calculation to find each of the missing numbers.

CHALLENGE



I wonder if a part-whole model or a bar model shows the numbers best.

I think it helps to draw a **diagram** with parts and wholes to show the missing information.



Checking strategies

- 1 a) Check Emma's subtractions using the inverse operation, and give each a tick in the box if it is correct or a cross if it is wrong.

$3,412 - 1,151 = 2,341$

3,412	+		=		□

$1,001 - 550 = 451$

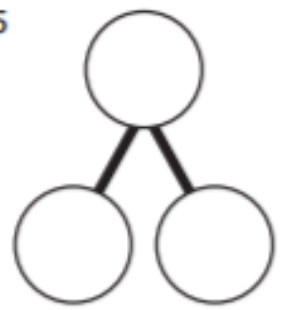
	+		=		□

$9,876 - 6,789 = 2,189$

	+		=		□

- b) Write the correct subtractions.

- 2 Holly bought a car for £1,899. She also paid £995 to get it repaired. Holly has calculated that she spent £2,894 in total.



Check Holly's calculation.

I think Holly is correct / incorrect because _____

- 3 Calculate the missing numbers.

a) $\square + 995 = 5,555$ c) $5,555 - \square = 995$

b) $\square - 5,555 = 995$ d) $\square - 995 = \square$

4 $4,499 + 3,499 = 7,998$



Do you agree with Dexter that his estimate is not right?

Explain how you would check this calculation.



I rounded to estimate $4,000 + 3,000 = 7,000$, but the answer rounds to 8,000 so I do not think my estimate is right.



- 5 Find the answer to this calculation and then show one way to check your answer.

Isla takes 2,599 paper clips out of a bag. There are 2,599 paper clips left in the bag. How many paper clips are there altogether?

CHALLENGE



Reflect

Show how to check $599 + 1,599 = 2,098$ using both estimating and an inverse operation.



Thursday

Power Up

Use the measurements in the picture to answer the questions.

How many metres above ground level is the yellow parrot flying?

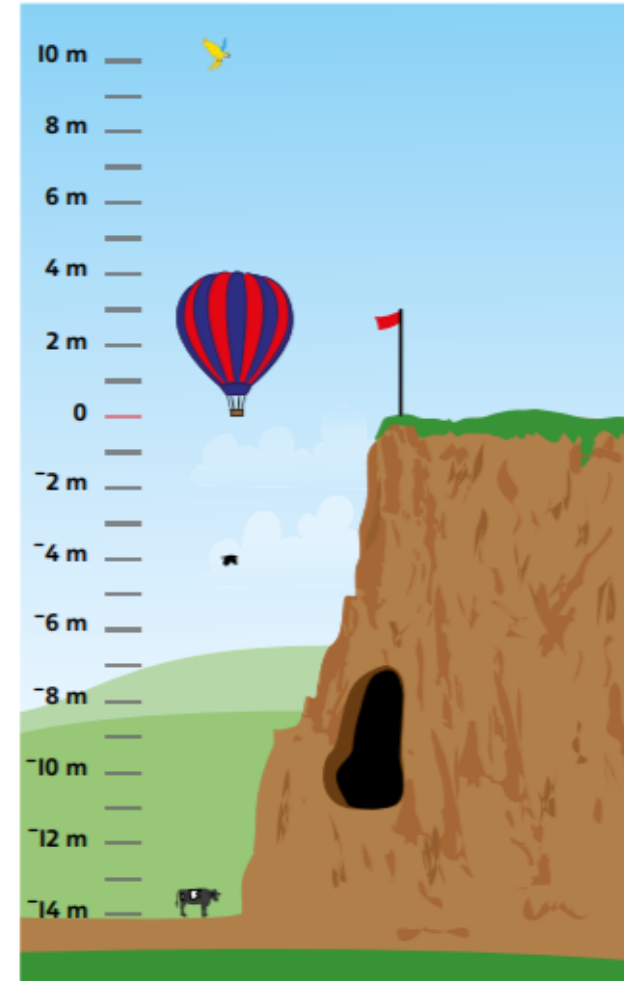
How many metres would the cow have to jump to touch the black crow?

The crow rises 9 metres from its current spot.
How high is it now?

If the balloon flies into the cave, how many metres has it fallen?

How many metres are there between the top of the flag and the bottom of the cliff?

Write your calculations as number sentences.



Problem solving – addition and subtraction 1



Discover



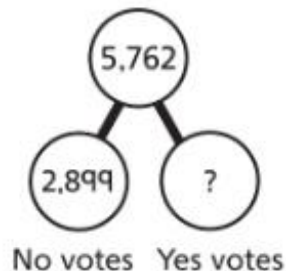
- Show how to find the number of votes for Yes using a diagram.
- Decide on the best strategy to calculate the answer. Did Yes or No get more votes?

Share

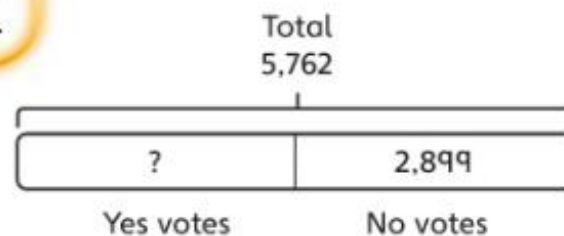
a)



I will show this using a part-whole diagram.



I will use a bar model.



Both diagrams show the parts and the whole. The missing part is the number of Yes votes.

b) We need to subtract to find the missing part.

$$\begin{array}{r}
 \text{Th H T O} \\
 \cancel{4}8 \ \cancel{1}6 \ \cancel{7}5 \ 2 \\
 - 2 \ 8 \ 9 \ 9 \\
 \hline
 2 \ 8 \ 6 \ 3
 \end{array}$$

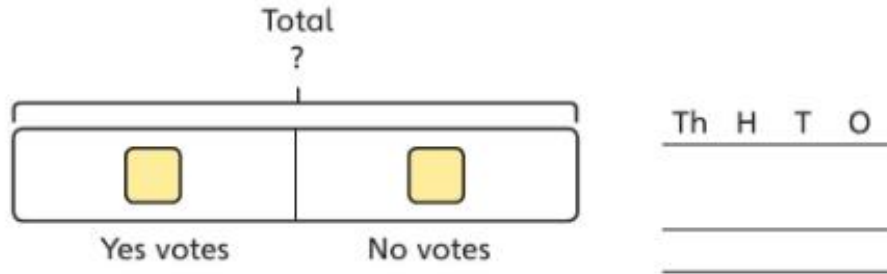
$$\begin{array}{r}
 \text{Th H T O} \\
 \cancel{4}8 \ \cancel{1}7 \ 6 \ 3 \\
 - 2 \ 9 \ 0 \ 0 \\
 \hline
 2 \ 8 \ 6 \ 3
 \end{array}$$

There were 2,863 Yes votes. No got more votes because $2,899 > 2,863$.

Think together

- 1 In another vote, 1,775 people voted Yes and 3,007 voted No. How many people voted?

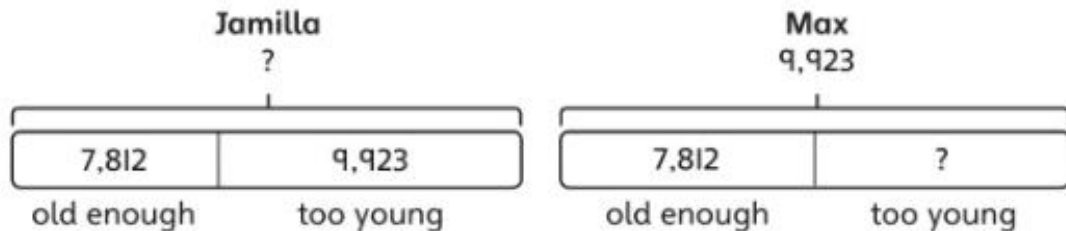
Add the information to the bar model, then show the calculation to find the answer.



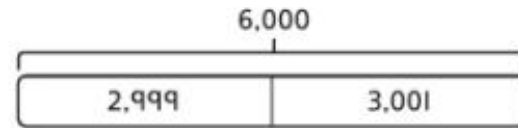
people voted.

- 2 Jamilla and Max have drawn bar models to solve this problem: 9,923 people live in a small town. 7,812 people are old enough to vote. How many people are too young to vote?

Discuss the bar models. What is right and wrong about each one?



- 3 Write four different missing number problems that could be shown by this diagram.



- 4 Draw your own bar models to show these calculations.

a) - 199 = 2,475

b) 2,475 - 199 =

c) 199 = 2,475 -

d) 199 + 2,475 =

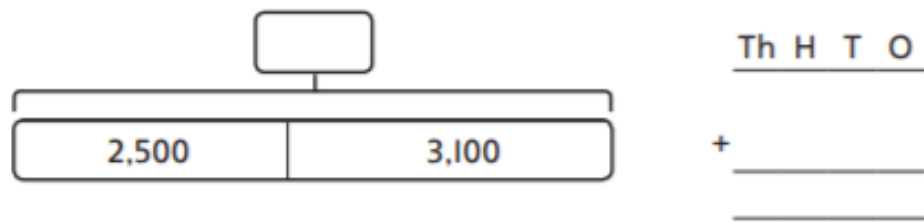
CHALLENGE

I do not think I need to draw four different bar models.



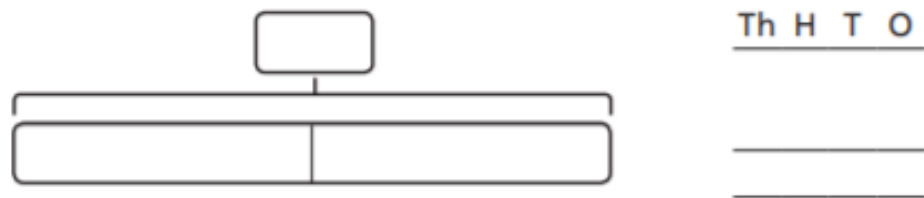
Problem solving – addition and subtraction 1

- 1 a) Ambika poured 2,500 ml of water onto a flower bed. Aki poured 3,100 ml of water. How much water did they pour altogether?



They poured ml of water altogether.

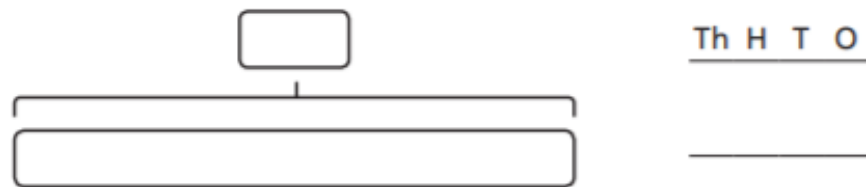
- b) Ambika started with 5,000 ml in her watering can. How much water does she have left now?



Ambika has ml of water left now.

- 2 Complete bar models to show both of these problems, then find the solutions to them.

- a) Mrs Dean lives 5,000 m from her school. She has cycled 3,900 m so far. How far does she have left to cycle?



She has m left to cycle.

- b) Mr Jones walks 1,250 m to the bus stop, then travels 2,800 m on the bus. How far does he travel altogether?

He travels m altogether.

- 3 Draw bar models and find the missing numbers.

- a) - 3,750 = 4,000 b) 4,000 - = 3,750

4 Crack the code.

CHALLENGE



★ is worth 2,000 less than ☁

♥ is worth 1,000 more than ★

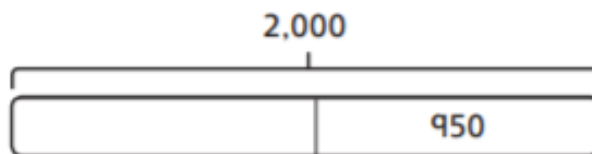


Blank area for writing the solution.

☁ = ▲ = ♥ = ★ =

Reflect

Write and solve a story problem to go with this bar model.



Five horizontal lines for writing a story problem and its solution, each preceded by a dot.