

RECALL

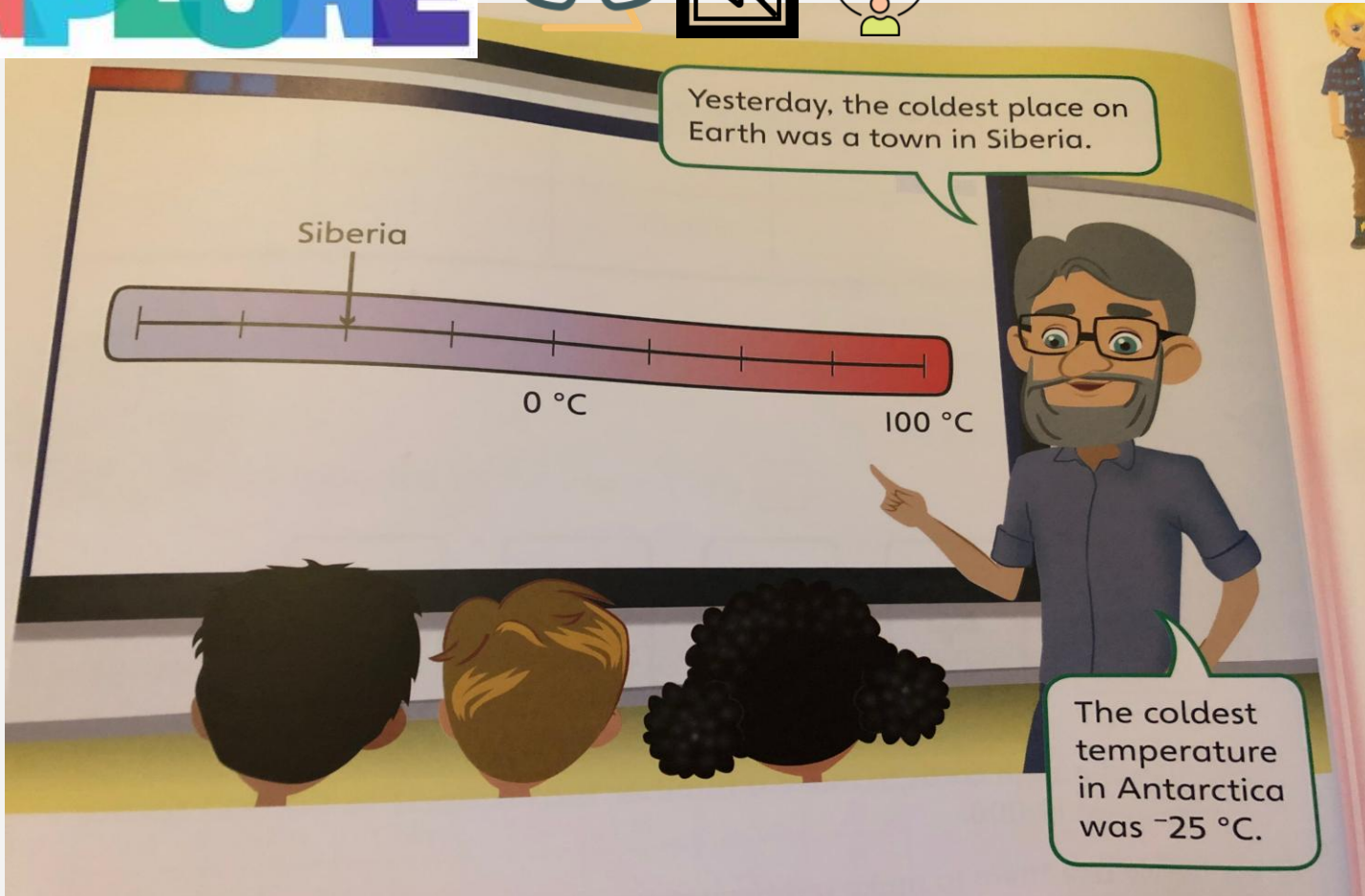
For each number line, complete all of the missing numbers.



L.O. USE NEGATIVE NUMBERS IN CONTEXT, AND CALCULATE INTERVALS ACROSS ZERO.

- **SOME WILL EVEN:** Solve problems involving negative numbers.
- **SOME WILL:** Find differences between positive and negative numbers.
- **MOST WILL:** Order both positive and negative numbers.
- **ALL WILL:** Identify positive and negative numbers.

EXPLORE



a) What was the temperature of the town in Siberia?

b) Where should the temperature in Antarctica be labelled on the thermometer?

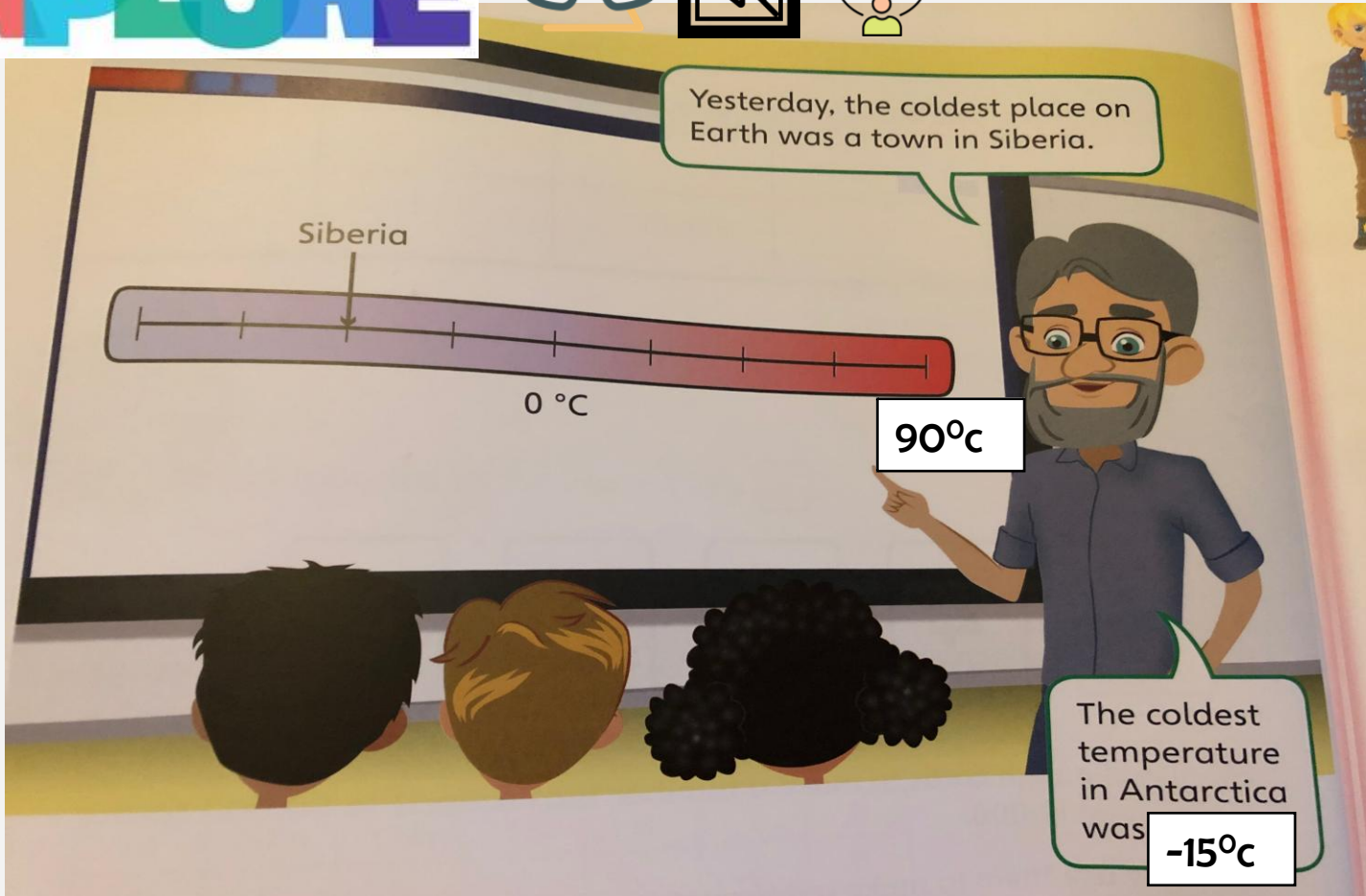
help

Draw the number line.



What is the difference between the temperature in Siberia and the temperature in Antarctica?

EXPLORE



a) What was the temperature of the town in Siberia?

b) Where should the temperature in Antarctica be labelled on the thermometer?

help

Draw the number line.



What is the difference between the temperature in Siberia and the temperature in Antarctica?



Write these sets of numbers
in order (lowest to greatest):

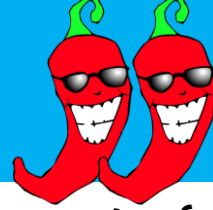
5 -3 -12

-6 -9 2

-1 7 -6

-7 1 -1

3 -16 -9



Write these sets of numbers
in order (lowest to greatest):

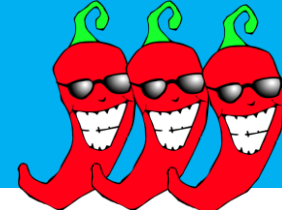
5.7 -3.8 -12

-6.3 -9 2.1

-1.8 7 -6.4

-0.7 0.8 -1

3.4 -16 -9.9



Find the difference between
these numbers:

5 -12

-6 2

-1 -6

-7 1

-16 -9



The temperature in Moscow was 4°C .
The temperature dropped by 9°C overnight.
What was the lowest temperature overnight?



Write these sets of numbers in order (lowest to greatest):

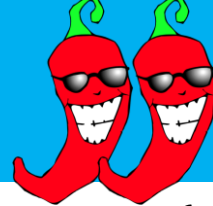
-12 -3 5

-9 -6 2

-6 -1 7

-7 -1 1

-16 -9 3



Write these sets of numbers in order (lowest to greatest):

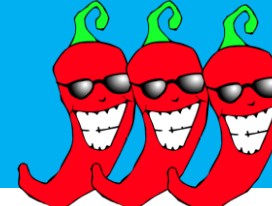
-12 -3.8 5.7

-9 -6.3 2.1

-6.4 -1.8 7

-1 -0.7 0.8

-16 -9.9 3.4



Find the difference between these numbers:

5 17 -12

-6 8 2

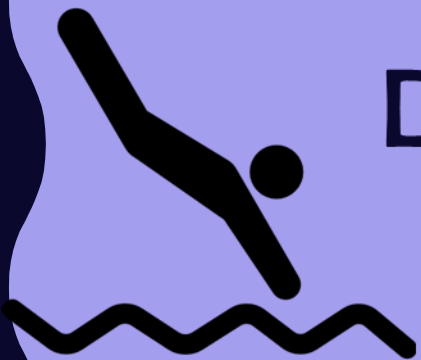
-1 5 -6

-7 8 1

-16 7 -9



The temperature in Moscow was 4°C . The temperature dropped by 9°C overnight. What was the lowest temperature overnight? -5



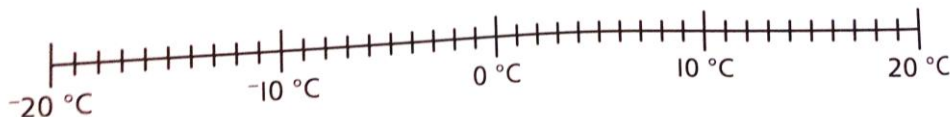
DIVE DEEPER 1

1

The table shows yesterday's temperature in three cities.

City	Temperature (°C)
Helsinki	-5
Paris	2
Moscow	-12

- What was the difference in temperature between Paris and Moscow?
- The temperature in Helsinki has risen by 8 degrees today.
What is the temperature in Helsinki today?



The difference between a positive and a negative number is 10. The digit value of the positive number is greater than the digit value of the negative number. What pairs of numbers could they be?

2

The table shows the temperature in different cities.

City	Temperature (°C)
London	-2
Birmingham	-7
Liverpool	-8
Manchester	2
Cardiff	0
York	-3
Glasgow	-4

The temperature in York increases by 11 °C.
What is the temperature in York now?

What is the difference in temperature between Glasgow and Birmingham?

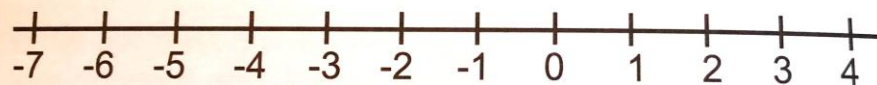
 °C °C

3

Month	Average temperature (°C)
January	-3
February	-1
March	0
April	9
May	16
June	18
July	26
August	28
September	20
October	11
November	5
December	-2

- 1 How many degrees colder is the average temperature in September than in August?
- 2 In which month is the average temperature 2°C warmer than the average temperature for January?
- 3 How many degrees difference is there between the average temperature for January and the average temperature for April?
- 4 In which month is the average temperature 17°C warmer than the average temperature for February?
- 5 Find the difference between the average temperature in July and the average temperature for December.
- 6 In which month is the average temperature 20°C warmer than the average temperature for December?

Use the number line to solve these calculations:



$$-5 + 7 =$$

$$-7 + 4 =$$

$$-1 - 5 =$$

$$1 - 5 =$$



DIVE DEEPER 2



1) 14°C
 3°C

2) 3°C
 -8°C

3)
8 degrees
February
12 degrees
May
24 degrees
June

$$-5 + 7 = 2$$

$$= -3$$

$$-1 - 5 = -6$$

$$-4$$

$$-7 + 4$$

$$1 - 5 =$$

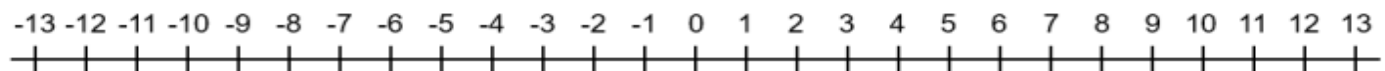




Tug Harder!

This game is for two players.

You will need to draw a number line from -13 to 13 on a piece of paper, and find a counter and two 1-6 dice to use.



Decide who is Positive and who is Negative.

Positive moves the counter from left to right and Negative moves the counter from right to left. (Why do you think we have suggested this way round?)

Place the counter on 0.



Take it in turns to throw the two dice and add the scores then move the counter that number of places in your direction.

If the counter reaches -13, Negative has won. If the counter reaches 13, Positive has won.

Is it better to play a game where you have to reach the end exactly, or where you can go over the end? What do you think and why?

Now change the game. This time, when you throw the dice, you can decide whether to add, subtract, multiply or divide the numbers on the dice. You must reach -13 or 13 exactly to win.

Does this make a better game? What do you think? Why or why not?

How else could you change the game?

