



- 1) a) 16°C
 b) 18°C
 c) 12°C
 d) 14°C
- 2) a) -8°C
 b) 16°C
- 3) a) 14°C
 b) 15°C



- 1) $X = -8.5^{\circ}\text{C}$
 $Y = 1.5^{\circ}\text{C}$
- 2) a) Leo is incorrect. He has not taken into account that some of the numbers are negative.
 On Monday the difference is 14.5°C .
 On Tuesday the difference is 11.5°C .
 On Wednesday the difference is 15.5°C .

b) Wednesday

- 3) 3°C -3°C 1°C -1.5°C 2°C -0.5°C
- 3°C -3°C 1°C -1.5°C 2°C -0.5°C
- 3°C -3°C 1°C -1.5°C 2°C -0.5°C



1) $X = -1^{\circ}\text{C}$

$Y = 2^{\circ}\text{C}$

$Z = 5^{\circ}\text{C}$

a)

Measurement	Section
-4°C	D
4.5°C	G
-8°C	C
11.5°C	I
-10.5°C	B

b)

Section	Measurement
H	Between 6°C and 9°C
B	Between -12°C and -9°C
C	Between -9°C and -6°C
J	Between 12°C and 15°C

c) i) **D**ii) **E**iii) **B**



1) Draw your own number line to help you calculate the difference between these temperatures:

a) 12°C and -4°C



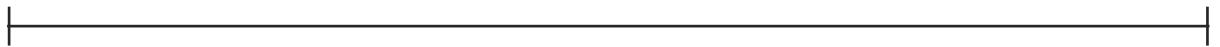
b) 10°C and -8°C



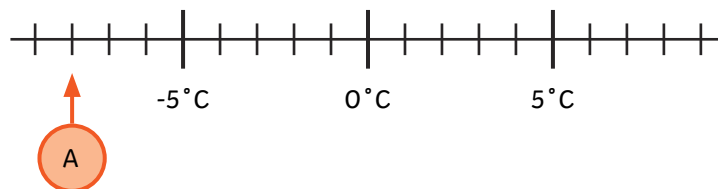
c) -5°C and 7°C



d) -11°C and 3°C



2) Here is part of a temperature scale. A shows the current outside temperature.



a) What is the outside temperature?

b) The inside temperature is 24°C warmer than it is outside. What is the inside temperature?

3) Here are the minimum and maximum temperatures for two places in January.

City	Minimum	Maximum
Gander (Canada)	-11°C	-3°C
Rome (Italy)	3°C	12°C

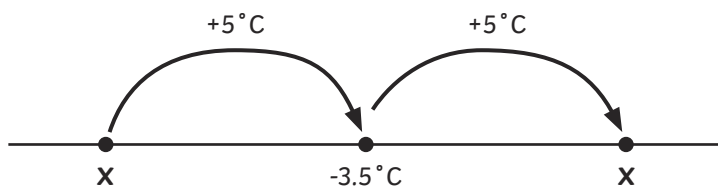


a) What is the difference in minimum temperatures between the places?

b) What is the difference in maximum temperatures between the places?



1) Here is part of a number line showing degrees ($^{\circ}\text{C}$).



What are the temperatures shown by X and Y?

X = _____ Y = _____

2) Here are the minimum and maximum temperatures for a town over three days.

City	Minimum	Maximum
Monday	-14.5°C	0°C
Tuesday	-10°C	1.5°C
Wednesday	-12.5°C	3°C



The day with the greatest difference between the minimum and maximum temperature is Monday.

Monday: $14.5 - 0 = 14.5$

Tuesday: $10 - 1.5 = 8.5$

Wednesday: $12.5 - 3 = 9.5$

a) Do you agree with Leo? Explain your answer.

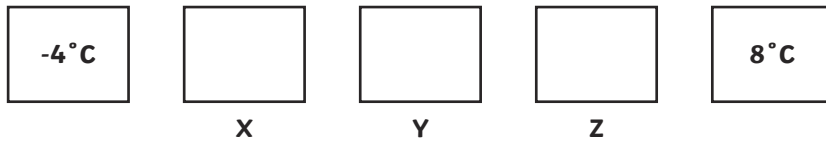
b) Which day has the greatest difference between the maximum and minimum temperatures?

3) Circle two temperatures which have a difference of 2.5°C . (If you can find more than one solution, circle each pair in a different colour.)

3°C -3°C 1°C -1.5°C 2°C -0.5°C



1) Jaz has made a sequence of temperature measurements. The same amount is added each time. Write the missing measurements X, Y and Z.

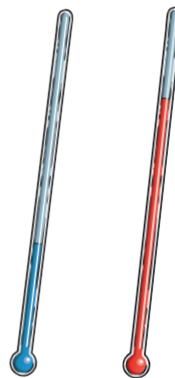


2) Here is part of a number line:



a) Write the letter of the section where each of these temperature measurements belongs. One has been done for you.

Measurement	Section
-4°C	D
4.5°C	
-8°C	
11.5°C	
-10.5°C	



b) Write a different temperature measurement which would fit in the section shown.

Section	Measurement
H	
B	
C	
J	

c) Which section would each of these fit in:

i) 3°C warmer than -8°C

ii) 6°C colder than 4.5°C

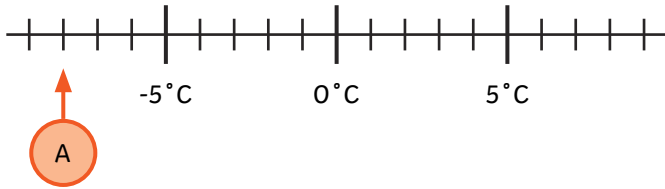
iii) 7°C colder than -2.5°C

1) Draw your own number line to help you calculate the difference between these temperatures:



- a) 12°C and -4°C
- b) 10°C and -8°C
- c) -5°C and 7°C
- d) -11°C and 3°C

2) Here is part of a temperature scale. A shows the current outside temperature.



- a) What is the outside temperature?
- b) The inside temperature is 24°C warmer than it is outside. What is the inside temperature?

3) Here are the minimum and maximum temperatures for two places in January.

City	Minimum	Maximum
Gander (Canada)	-11°C	-3°C
Rome (Italy)	3°C	12°C



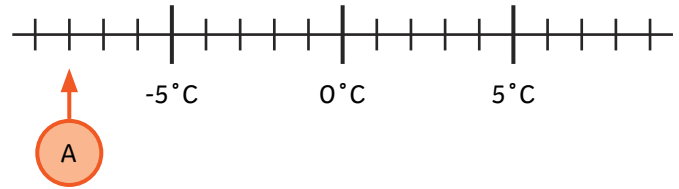
- a) What is the difference in minimum temperatures between the places?
- b) What is the difference in maximum temperatures between the places?

1) Draw your own number line to help you calculate the difference between these temperatures:



- a) 12°C and -4°C
- b) 10°C and -8°C
- c) -5°C and 7°C
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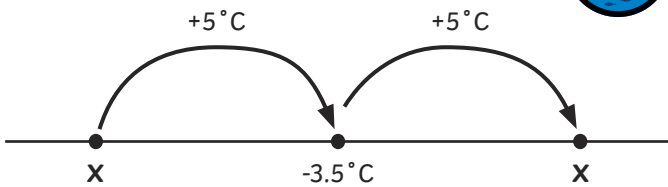
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City	Minimum	Maximum
Gander (Canada)	-11°C	-3°C
Rome (Italy)	3°C	12°C



- a) What is the difference in minimum temperatures between the places?
- b) What is the difference in maximum temperatures between the places?

- 1) Here is part of a number line showing degrees ($^{\circ}\text{C}$).



What are the temperatures shown by X and Y?

- 2) Here are the minimum and maximum temperatures for a town over three days.

City	Minimum	Maximum
Monday	-14.5°C	0°C
Tuesday	-10°C	1.5°C
Wednesday	-12.5°C	3°C

The day with the greatest difference between the minimum and maximum temperature is Monday.

Monday: $14.5 - 0 = 14.5$

Tuesday: $10 - 1.5 = 8.5$

Wednesday: $12.5 - 3 = 9.5$

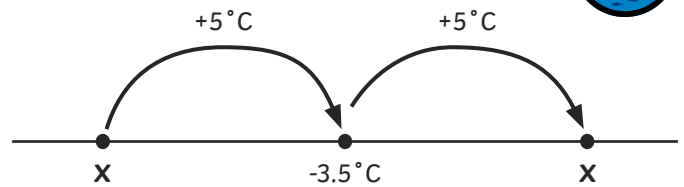


Leo

- a) Do you agree with Leo? Explain your answer.
 b) Which day has the greatest difference between the maximum and minimum temperatures?
 3) Circle two temperatures which have a difference of 2.5°C . (If you can find more than one solution, circle each pair in a different colour.)

3°C -3°C 1°C -1.5°C 2°C -0.5°C

- 1) Here is part of a number line showing degrees ($^{\circ}\text{C}$).



What are the temperatures shown by X and Y?

- 2) Here are the minimum and maximum temperatures for a town over three days.

City	Minimum	Maximum
Monday	-14.5°C	0°C
Tuesday	-10°C	1.5°C
Wednesday	-12.5°C	3°C

The day with the greatest difference between the minimum and maximum temperature is Monday.

Monday: $14.5 - 0 = 14.5$

Tuesday: $10 - 1.5 = 8.5$

Wednesday: $12.5 - 3 = 9.5$

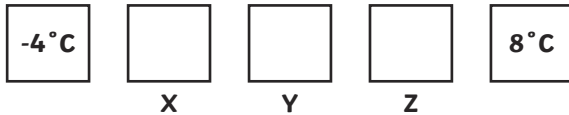


Leo

- a) Do you agree with Leo? Explain your answer.
 b) Which day has the greatest difference between the maximum and minimum temperatures?
 3) Circle two temperatures which have a difference of 2.5°C . (If you can find more than one solution, circle each pair in a different colour.)

3°C -3°C 1°C -1.5°C 2°C -0.5°C

- 1) Jaz has made a sequence of temperature measurements. The same amount is added each time. Write the missing measurements X, Y and Z.

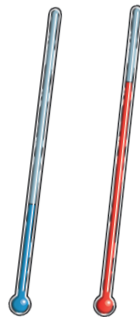


- 2) Here is part of a number line:



- a) Write the letter of the section where each of these temperature measurements belongs. One has been done for you.

Measurement	Section
-4°C	D
4.5°C	
-8°C	
11.5°C	
-10.5°C	



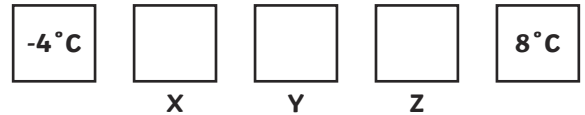
- b) Write a different temperature measurement which would fit in the section shown.

Section	Measurement
H	
B	
C	
J	

- c) Which section would each of these fit in:

- i) 3°C warmer than -8°C
- ii) 6°C colder than 4.5°C
- iii) 7°C colder than -2.5°C

- 1) Jaz has made a sequence of temperature measurements. The same amount is added each time. Write the missing measurements X, Y and Z.

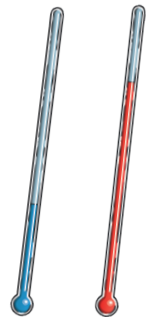


- 2) Here is part of a number line:



- a) Write the letter of the section where each of these temperature measurements belongs. One has been done for you.

Measurement	Section
-4°C	D
4.5°C	
-8°C	
11.5°C	
-10.5°C	



- b) Write a different temperature measurement which would fit in the section shown.

Section	Measurement
H	
B	
C	
J	

- c) Which section would each of these fit in:

- i) 3°C warmer than -8°C
- ii) 6°C colder than 4.5°C
- iii) 7°C colder than -2.5°C

Surface Temperatures of Planets

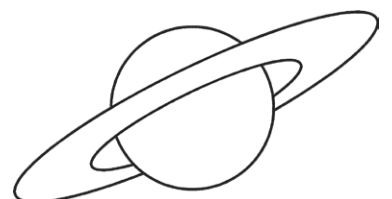
To use negative numbers in context.



Here are the maximum and minimum temperatures of the surfaces of these rocky planets and the Moon. Complete the last column of the chart:

Planet	Minimum Surface Temperature	Maximum Surface Temperature	Difference Between Maximum and Minimum
Mercury	-170°C	449°C	
Venus	465°C	465°C	
Earth	-89°C	58°C	
Mars	-125°C	20°C	
the Moon	-173°C	127°C	

1. What is the difference between the minimum surface temperature of Mercury and Mars?
2. What is the difference between the minimum surface temperature of Venus and Mercury?
3. The difference in minimum temperatures between two planets is 590°C.
Which two planets is it?
4. What is the range of all the temperatures on the chart?



Surface Temperatures of Planets **Answers**

Here are the maximum and minimum temperatures of the surfaces of these rocky planets and the moon. Complete the last column of the chart:

Planet	Minimum Surface Temperature	Maximum Surface Temperature	Difference Between Maximum and Minimum
Mercury	-170°C	449°C	619°C
Venus	465°C	465°C	0°C
Earth	-89°C	58°C	147°C
Mars	-125°C	20°C	145°C
the Moon	-173°C	127°C	300°C

1. What is the difference between the minimum surface temperature of Mercury and Mars?
45°C
2. What is the difference between the minimum surface temperature of Venus and Mercury?
635°C
3. The difference in minimum temperatures between two planets is 590°C.
Which two planets is it?
Venus and Mars
4. What is the range of all the temperatures on the chart?
638°C

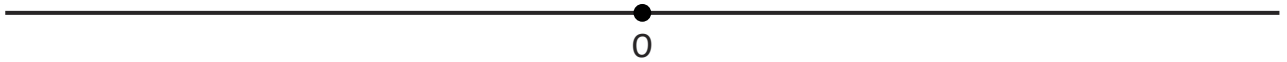
World Temperatures

To use negative numbers in context.



1. Use an empty number line to calculate the difference between a negative and a positive number.

a. 12 and -9



b. -5 and 20



c. 9 and -9



2. Complete this table. Calculate the differences in minimum and maximum temperatures for each city. Show in the space under the table how you worked out your answer.

City	Minimum	Maximum	Difference
Nanjing (China)	-2°C	7°C	
Potsdam (Germany)	-3°C	2°C	
Zagreb (Croatia)	-4°C	2°C	
Salzburg (Austria)	-6°C	1°C	

Nanjing (China)

Potsdam (Germany)

Zagreb (Croatia)

Salzburg (Austria)

3. What is the difference between the highest and the lowest temperature on the table?
Show how you worked out the answer.

World Temperatures Answers

1. Use an empty number line to calculate the difference between a negative and a positive number.

a. **21**

b. **25**

c. **18**

2. Complete this table. Calculate the differences in minimum and maximum temperatures for each city. Show in the space under the table how you worked out your answer.

Answers show correct use of a number line to achieve the following answers:

City	Minimum	Maximum	Difference
Nanjing (China)	-2°C	7°C	9°C
Potsdam (Germany)	-3°C	2°C	5°C
Zagreb (Croatia)	-4°C	2°C	6°C
Salzburg (Austria)	-6°C	1°C	7°C

3. What is the difference between the highest and the lowest temperature on the table?
Show how you worked out the answer.

13°C

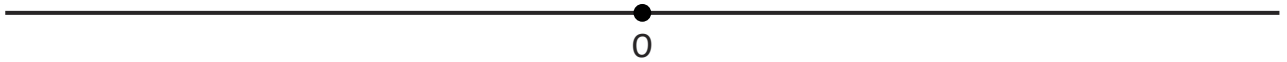
World Temperatures

To use negative numbers in context.



1. Draw a number line to calculate the difference between these negative and positive numbers.

a. -18 and 9



b. 23 and -13



c. -29 and 25



2. Here are the minimum and maximum temperatures between different cities around the world in January:

City	Minimum	Maximum
Nikko (Japan)	-8 °C	0 °C
Melbourne (Australia)	6 °C	26 °C
Turin (Italy)	-3 °C	7 °C
King Salmon (USA)	-13 °C	-5 °C
Gander (Canada)	-11 °C	-3 °C

- a. What is the difference in minimum temperature between Turin and King Salmon?
Show how you worked out the answer.

- b. What is the difference in maximum temperature between Melbourne and Gander?
Show how you worked out the answer.

- c. What is the difference between the highest and the lowest temperature on the table?

- d. The difference in maximum temperatures between two cities is 31°C . Which two cities is it?

- e. The difference in minimum temperatures between two cities is 14°C . Which two cities is it?

World Temperatures Answers

1. Use an empty number line to calculate the difference between a negative and a positive number.
 - a. **27**
 - b. **36**
 - c. **54**

2. Here are the minimum and maximum temperatures between different cities around the world in January:
 - a. What is the difference in minimum temperature between Turin and King Salmon?
Show how you worked out the answer.
10°C

 - b. What is the difference in maximum temperature between Melbourne and Gander?
Show how you worked out the answer.
29°C

 - c. What is the difference between the highest and the lowest temperature on the table?
39°C

 - d. The difference in maximum temperatures between two cities is 31°C. Which two cities is it?
Melbourne and King Salmon

 - e. The difference in minimum temperatures between two cities is 14°C. Which two cities is it?
Nikko and Melbourne

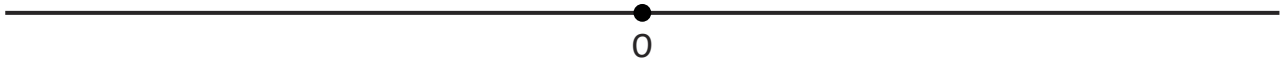
World Temperatures

To use negative numbers in context.



1. Draw a number line to calculate the difference between these negative and positive numbers.

a. -19 and 11



b. 32 and -37



c. -47 and 39



2. Here are the minimum and maximum temperatures between different cities around the world in January:

City	Minimum	Maximum
Cree Lake (Canada)	-27°C	-15°C
Sisak (Croatia)	-3°C	4°C
San Sebastian (Puerto Rico)	17°C	32°C
Xining (China)	-14°C	1°C
Jaipur (India)	18°C	23°C

a. What is the difference in minimum temperature between San Sebastian and Cree Lake?

b. What is the difference in maximum temperature between Cree Lake and Xining?
Show how you worked out the answer.

c. What is the difference between the highest and the lowest temperature on the table?

- d. The difference in maximum temperatures between two cities is 38°C . Which two cities is it?

- e. The difference in minimum temperatures between two cities is 31°C . Which two cities is it?

- f. Another city has a minimum temperature which is 9°C colder than Sisak and a maximum temperature which is 15°C warmer than Xining. What is the difference between the minimum and maximum temperature of this city? Show how you worked out the answer.

World Temperatures Answers

1. Use an empty number line to calculate the difference between a negative and a positive number.
 - a. **30**
 - b. **69**
 - c. **86**

2. Here are the minimum and maximum temperatures between different cities around the world in January:
 - a. What is the difference in minimum temperature between San Sebastian and Cree Lake?
44°C

 - b. What is the difference in maximum temperature between Cree Lake and Xining?
Show how you worked out the answer.
16°C

 - c. What is the difference between the highest and the lowest temperature on the table?
59°C

 - d. The difference in maximum temperatures between two cities is 38°C. Which two cities is it?
Cree Lake and Jaipur

 - e. The difference in minimum temperatures between two cities is 31°C. Which two cities is it?
Xining and San Sebastian

 - f. Another city has a minimum temperature which is 9°C colder than Sisak and a maximum temperature which is 15°C warmer than Xining. What is the difference between the minimum and maximum temperature of this city? Show how you worked out the answer.
28°C