

Class 11 Maths

In order to help you with all of your maths learning, it is important that you are practising your times tables regularly. If you have good times tables knowledge, you will find other areas of maths easier.

Remember to go on to Times Tables Rockstars regularly:

<https://play.ttrockstars.com/auth>

Your login is the same as the one you use in school.

Numberbots also uses the same login as TTRockstars. See the link below:

<https://play.numbots.com/#/account/search-school>

Recap- Place Value

1. Which numbers have a 6 ones?

8906 3848 2106 1682 9863 8296 6265 9273

2. Which numbers have 5 tens?

7653 7902 5623 7855 6539 7205 9058 1251

3. Which numbers have 3 hundreds?

7983 3379 1925 1393 6793 2833 9389 7832

4. Which numbers have 7 thousands?

8907 7293 6798 4487 8974 8797 7789 3928

5. Which numbers have 8 tens?

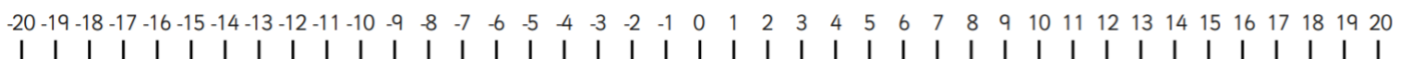
3893 9800 1280 2378 1189 3465 4829 7381

Counting

This concept is fairly new, but most of you found this fairly easy when it was first introduced so have a go at the following activities.

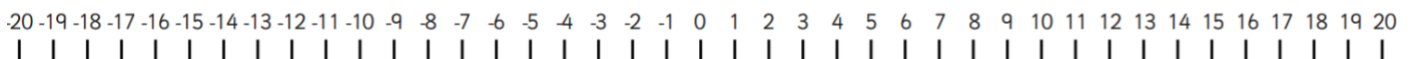
Focus: To count backwards through 0 including negative numbers

A. Counting backwards can be useful – especially if you want to make a rocket take off! 10, 9, 8, 7, 6, 5, 4, 3, 2, 1 BLAST OFF! BUT what happens when we are counting backwards and we get to '0'? We keep going using negative numbers.



Use the number lines to help you count backwards through 0. Start on the number given and jump the correct number of jumps backwards until you have your answer.

1. From 5, count back 7.



2. From 8, count back 12.



3. From 7, count back 15.
4. From 2, count back 9.
5. From 12, count back 22.

B. These counting back tasks can be written as sums e.g. $7 - 8$. 7 is the number you start on and 8 is the number of jumps you count backwards. $7 - 8 = -1$

Use the number line below to jump with your finger to count backwards and work out the answers to the sums.



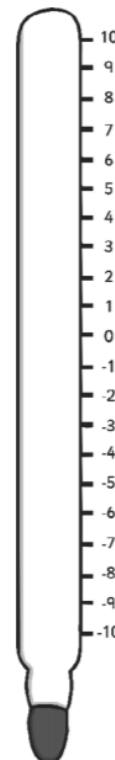
- | | | | |
|-------------------------------------|------------------------------------|------------------------------------|-------------------------------------|
| 1. $6 - 12 =$ <input type="text"/> | 2. $5 - 10 =$ <input type="text"/> | 3. $7 - 15 =$ <input type="text"/> | 4. $16 - 17 =$ <input type="text"/> |
| 5. $11 - 20 =$ <input type="text"/> | 6. $1 - 7 =$ <input type="text"/> | 7. $6 - 11 =$ <input type="text"/> | 8. $19 - 30 =$ <input type="text"/> |

C. Being able to count back through 0 can help you understand temperature changes. Imagine a thermometer is a number line on its side. Draw a thermometer like the one on this page to help you to jump backwards and answer the following questions.



When the temperature drops, you can count backwards on your number line/thermometer and calculate the new temperature.

1. The temperature is 7°C then it falls by 9°C . What is the new temperature?
2. At six o'clock in the evening the temperature is 11°C . It falls by 14°C at night. What is the new temperature?
3. During the day the temperature is 1°C , by the evening it has fallen by 5°C . What is the new temperature?
4. The temperature is 3°C then it falls by 12°C the next day. What is the new temperature?
5. At nine o'clock in the morning the temperature is 5°C . It falls by 9°C at night. What is the new temperature?



Arithmetic:

Focus: To order and compare numbers beyond 1,000

Here are some tips on how to answer the following questions.

Comparing numbers to decide which are bigger and which are smaller requires a close look at the value of each digit. The best way to compare the size of numbers directly is to use a place value chart to inspect them. Consider the following set of numbers - 999 1,001 1,099 9,001 10,001

It could be possible to get mixed up when ordering these but with a place value chart there is no confusion - let's put the numbers into this place value chart:

Ten Thousands	Thousands	Hundreds	Tens	Ones	
		9	9	9	999
	1	0	0	1	1001
	1	0	9	9	1099
	9	0	0	1	9001
1	0	0	0	1	10 001

As a digit is placed further to the left on the place value chart, its value increases. So, when comparing how big numbers are, it is always worth starting at the left (largest) and moving to the right (smallest).

So, when comparing, if a number has digits further to the left of the grid than the others, (10,001) then it is obviously the largest. However, if more than one number has a digit in the same column, then check to see which has the greatest value (this will be the bigger number).

If both numbers have same value digit in the same column, then you keep looking to the right until you find a difference (1,099 is bigger than 1,001). Using this system will help to accurately order numbers from largest to smallest.

Have a go at the following questions. It may be useful for you to draw out the place value chart like the one above to help you.

A. Write each of the numbers in order from highest to lowest.

1. 856 5,001 4,999 949 4,959
2. 35,375 7357 735 5,735 5,573
3. 2,632 6,366 6,332 999 1,001
4. 9,001 999 4,526 10,001 1,009
5. 2,828 8,228 2,882 20,820 8,802
6. 6,400 46,001 64,001 4,600 6,040

B. Compare the size of the following numbers and insert one of these symbols $<$ $>$ to make the number statement read correctly. Sketching a mini place value chart may help you with these. The first one has been done for you.

1.	817	$>$	781	2.	1026		6021
3.	6205		6208	4.	1099		9011
5.	8574		7548	6.	3991		3919
7.	4274		7442	8.	1056		10 065
9.	7891		7198	10.	10 001		10 010
11.	9999		10 000	12.	80 102		29 999