Counting Back Past Zero Using Negative Numbers

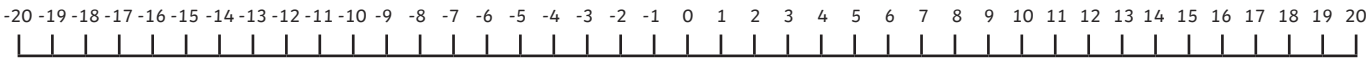
Aim – I can count backwards past zero using negative numbers.

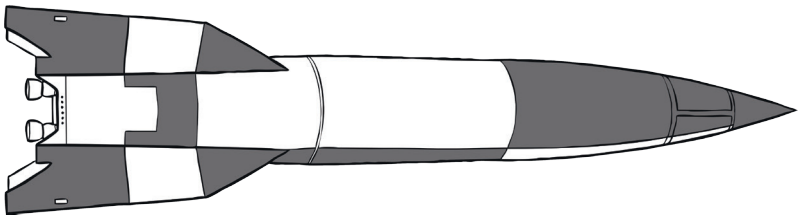
Counting backwards can be useful – especially if you want to make a rocket take off!

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'?

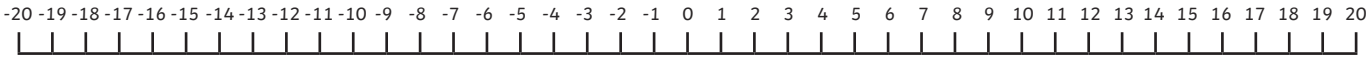
We keep going using negative numbers.





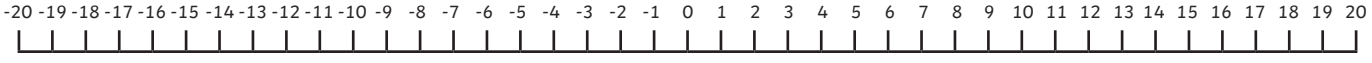
A. Use the number lines to help you count backwards beyond 0. Start on the number given and draw the right number of jumps backwards until you have your answer.

1. From 5, count back 7.



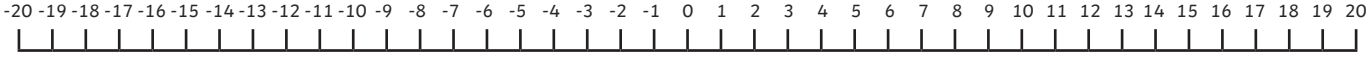
Answer = ☐

2. From 8, count back 12.



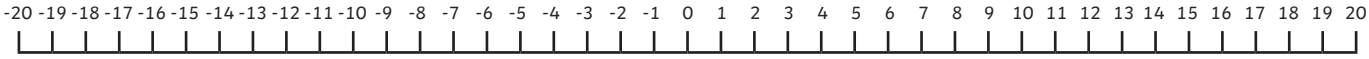
Answer = ☐

3. From 7, count back 15.



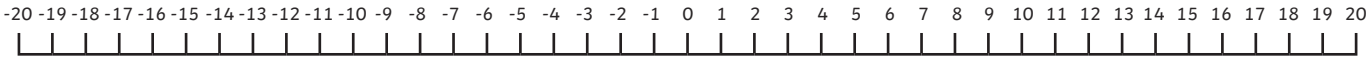
Answer = ☐

4. From 2, count back 9.



Answer = ☐

5. From 12, count back 22.



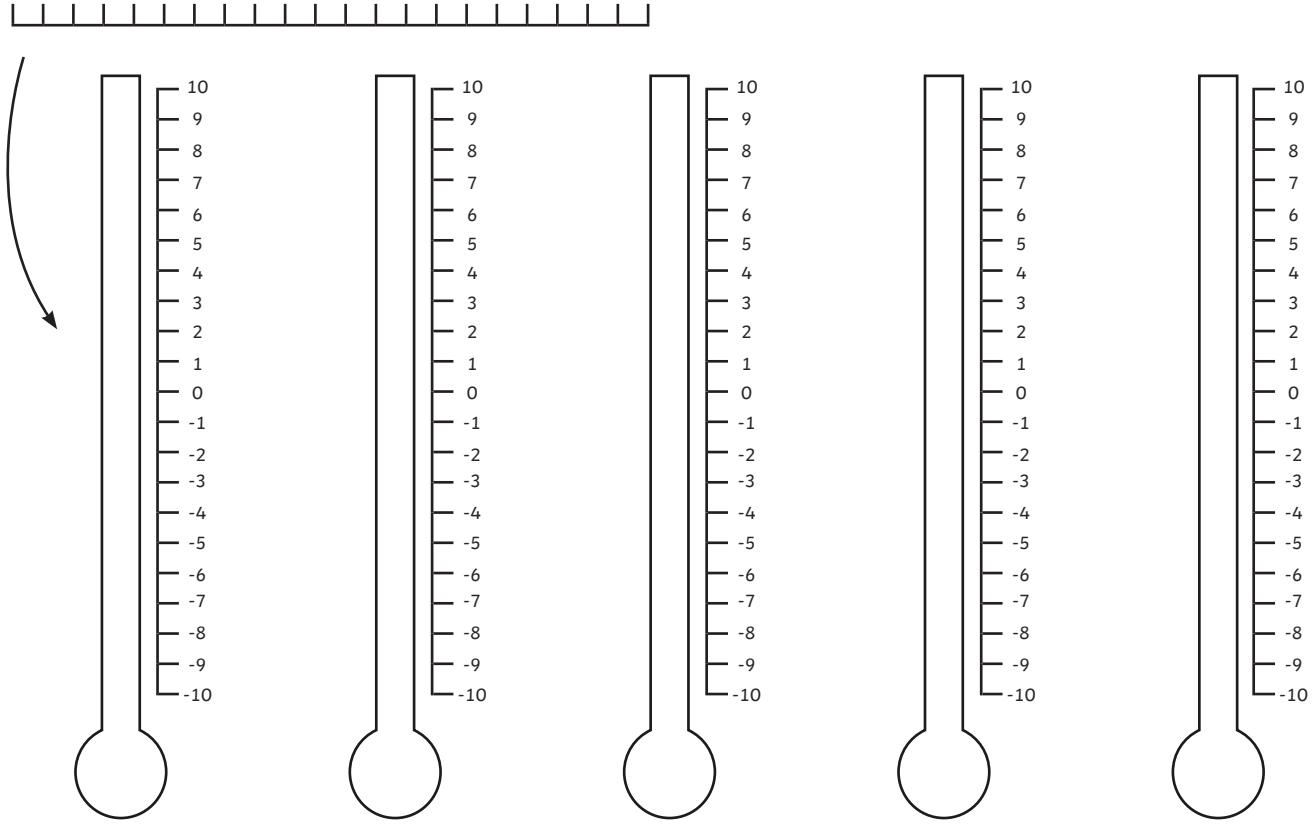
Answer = ☐

B. These counting back tasks can be written as calculations 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 calculations.

1. 6 - 12 = ☐
2. 5 - 10 = ☐
3. 7 - 15 = ☐
4. 16 - 17 = ☐
5. 11 - 20 = ☐
6. 1 - 7 = ☐
7. 6 - 11 = ☐
8. 19 - 30 = ☐

C. Being able to count back beyond 0 can help you to understand temperature changes. Imagine a thermometer is a number line but that it is on its side. Use these thermometers for drawing jumps on to help you answer the questions on the next page.



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?

Counting Back Past Zero Using Negative Numbers **Answers**

A. Use the number lines to help you count backwards beyond 0. Start on the number given and draw the right number of jumps backwards until you have your answer.

1. From 5, count back 7 = **-2**
2. From 8, count back 12 = **-4**
3. From 7, count back 15 = **-8**
4. From 2, count back 9 = **-7**
5. From 12, count back 22 = **-10**

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

1. 6 - 12 = **-6**
2. 5 - 10 = **-5**
3. 7 - 15 = **-8**
4. 16 - 17 = **-1**
5. 11 - 20 = **-9**
6. 1 - 7 = **-6**
7. 6 - 11 = **-5**
8. 19 - 30 = **-11**

C. Being able to count back beyond 0 can help you to understand temperature changes. Imagine a thermometer is a number line but that it is on its side. Use these thermometers for drawing jumps on to help you answer the questions on the next page.

1. The temperature is 7°C then it falls by 9°C. What is the new temperature? **-2°C**
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°C**
3. During the day the temperature is 1°C, by the evening it has fallen by 5°C. What is the new temperature? **-4°C**
4. The temperature is 3°C then it falls by 12°C the next day. What is the new temperature? **-9°C**
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? **-4°C**