Wednesday 12th January 2022

I can improve my poem adding pirate words.

What are your opinions on the book?

https://www.youtube.com/watch?v=TV4VhI6s8nk&ab_channel=AudiobookTreasures

What interesting phrases are included?

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I can improve my poem adding pirate words.

Rewrite lines from your poem adding more pirate themed phrases.

Use the given pirate vocabulary in your poem.

Make sure that your rhyme is at the end of the line.

Create rhyming couplets within your poem.

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I can program a sprite

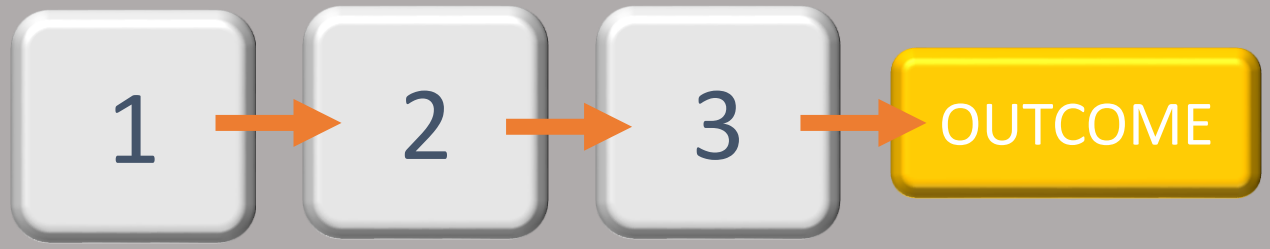
Use this link:
Scratch.mit.edu

See if you can program a character to move forwards.

What Are Algorithms?

An algorithm is a list of step-by-step instructions that are followed in order to get a task done.

Each instruction should be very simple so that a computer can understand exactly what it needs to do.



Here is an example of a very simple algorithm that we all perform every day in order to complete a task…

Getting Changed

Undress

Choose outfit

Put on underwear

Put on socks

Put on top

Put on bottoms

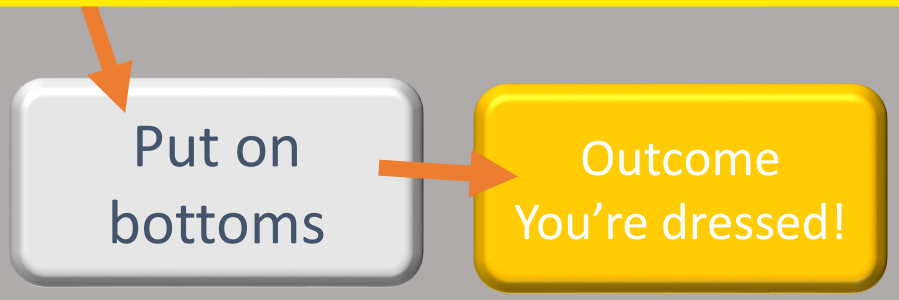
Outcome
You're dressed!

Other Algorithms

In an algorithm, there is usually more than one way to solve a problem. For example, the steps for getting dressed can be done in **different orders** to the order

Another example of a type of algorithm is a cooking recipe.

Can you think of any more algorithms from everyday life?



A ‘Bubble Sort’ Algorithm: How it Works

A ‘Bubble Sort’ is a simple type of sorting that an algorithm on a computer does. It is called this as the small elements of the sort with rise to the top.

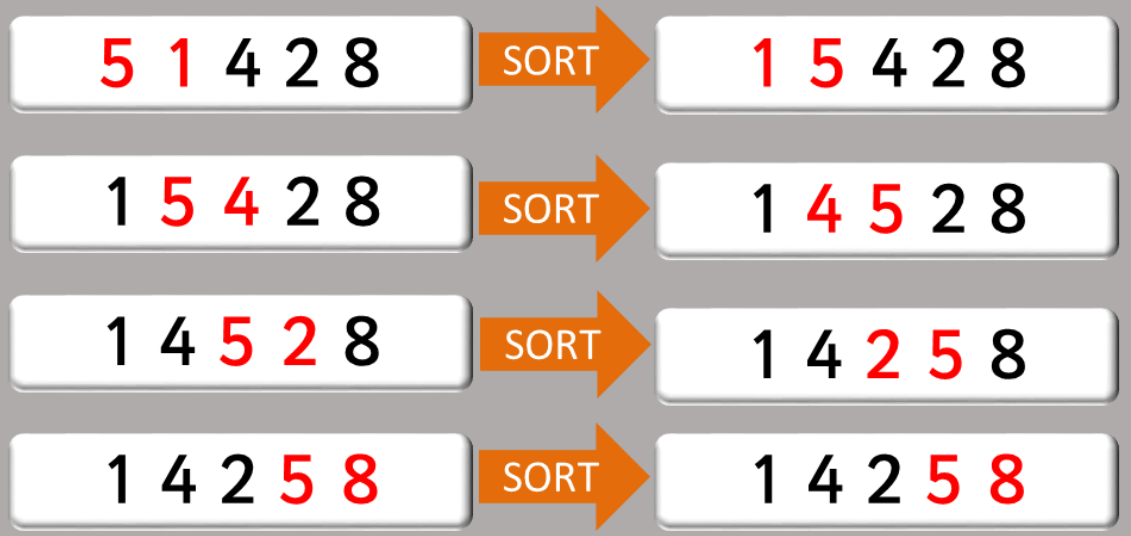
Lets use numbers as an example.

Let us say that we are trying to sort the numbers:

5 1 4 2 8

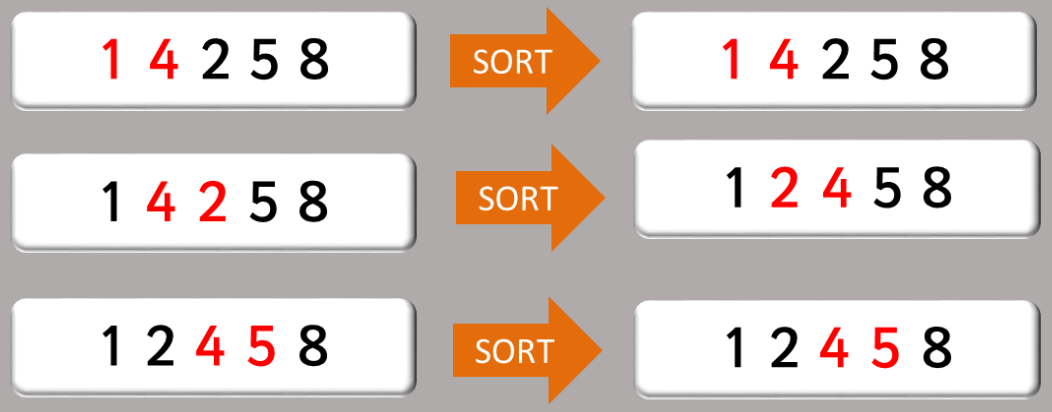
A ‘Bubble Sort’ Algorithm: How it Works

This algorithm sorts things by comparing the first 2 numbers in a line at a time, and swapping them if the number on the right is smaller than the number on the left. It runs through each line until it no longer needs to swap any numbers.



As you can see, the numbers are still not sorted and the algorithm has reached the end of the line of numbers.
It will run again until there are no more numbers to swap, which indicates that its job is done.

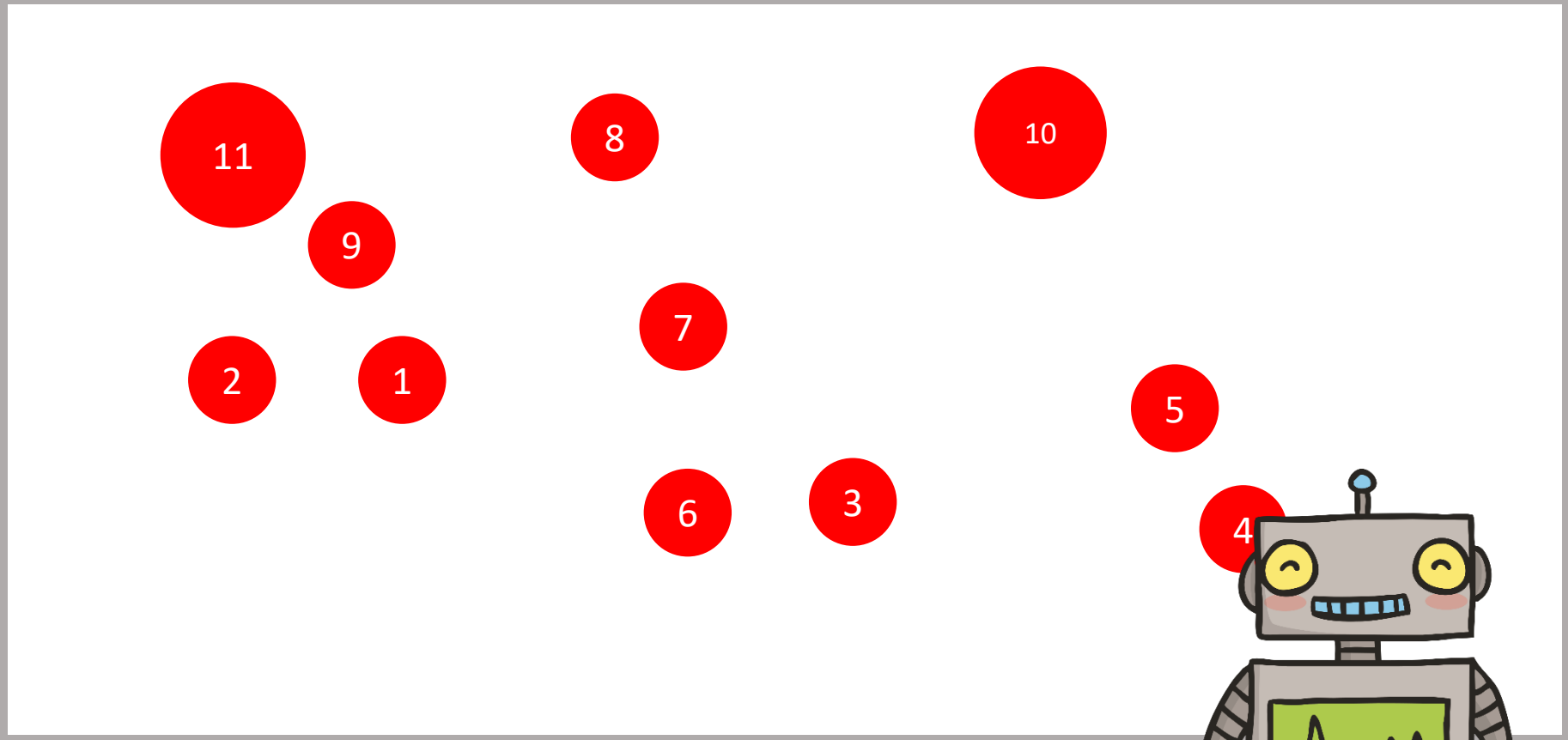
Bubble Sort Algorithm: Second Sort



The algorithm has completed its task and can now stop running.

This is a very simple but slow algorithm.

Bubble Sort Algorithm



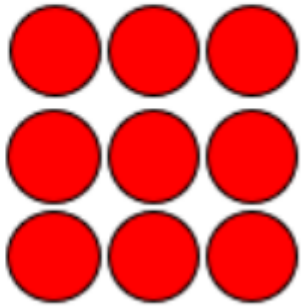
Here is a simple animation that illustrates how a ‘bubble sort’ algorithm works.

1 2. 0 1. 2 2

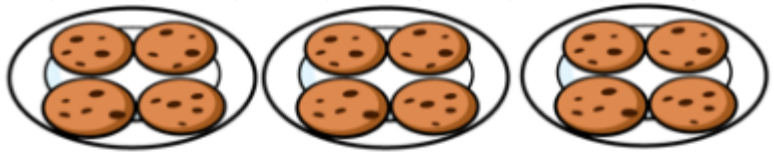
https://vimeo.com/486330232

I can use related calculations

1. Here is an array.
   Write a multiplication and division equation to represent the array.



2. Here are some cookies.
   Write two multiplication and two division equations to represent the cookies.



3. Use 6x8=48 to complete the equations

$8 \times 6 = \square$ $48 \div \square = \square$

Related calculations

1 Complete the number sentences.

a)

3 × 2 ones = ☐ ones

3 × 2 = ☐

b)

3 × 2 tens = ☐ tens

3 × 20 = ☐

2 Use base 10 to represent the multiplications.

Complete the number sentences.

a) 2 × 4 = ☐

2 × 40 = ☐

b) 5 × 3 = ☐

5 × 30 = ☐

c) 5 × 2 = ☐

5 × 20 = ☐

d) 2 × 8 = ☐

80 × 2 = ☐

3 Nijah makes these arrays.

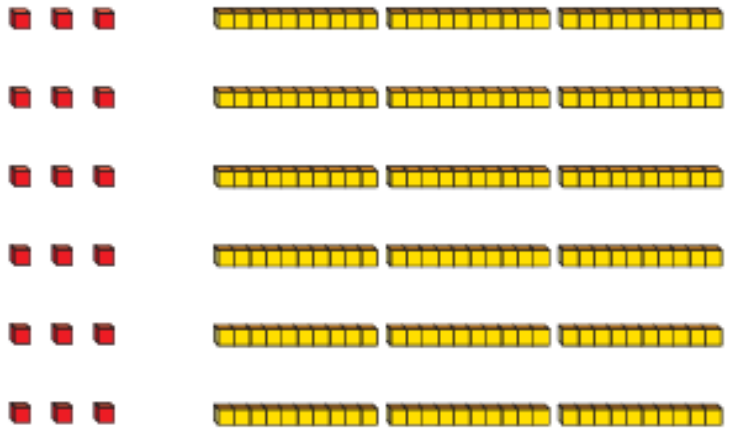
Complete the number sentences.

4 × 3 = ☐ 4 × 30 = ☐

What is the same about the arrays? What is different?

4 Scott uses base 10 to make two related calculations.

Use the base 10 to complete Scott's calculations.



6 × 3 = ☐ 6 × 30 = ☐

How does the answer to the first calculation help you work out the second calculation?

5 Use these pieces of base 10 to complete the divisions.

14 ÷ 2 = ☐ 140 ÷ 2 = ☐

6

Use Dora's fact to complete the calculations.

a) 5 × 70 = ☐ **d)** 35 ÷ 5 = ☐

b) 7 × 5 = ☐ **e)** 350 ÷ 5 = ☐

c) 50 × 7 = ☐ **f)** 350 ÷ 7 = ☐

7 Mr Jones buys 12 large jugs.

The total cost of the jugs is £240

How much does each jug cost?

Each jug costs ☐

How did you work this out?

8 Complete the number sentences.

a) 3 × ☐ = 210 **c)** 4 × 90 = ☐

b) 240 ÷ 6 = ☐ **d)** 120 ÷ ☐ = 2

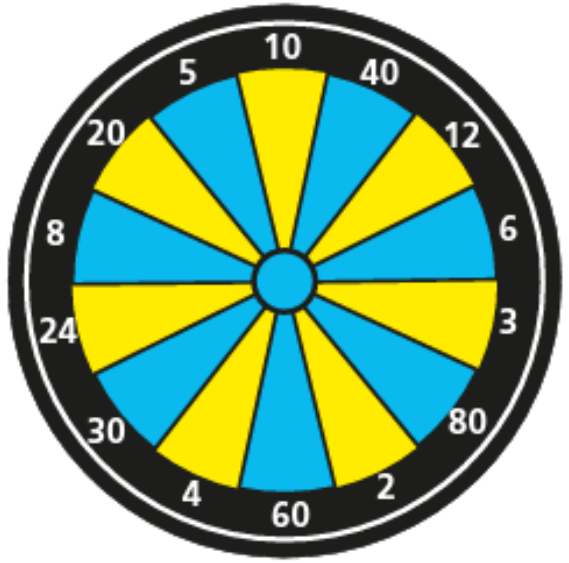
9 Huan throws two darts at the dartboard.

He multiplies the numbers he hits together.

Huan's score is 240

What two numbers could the darts have landed in?

☐ and ☐



How many different answers can you find?

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How do we say these instruments in Spanish?

I can identify nouns and articles