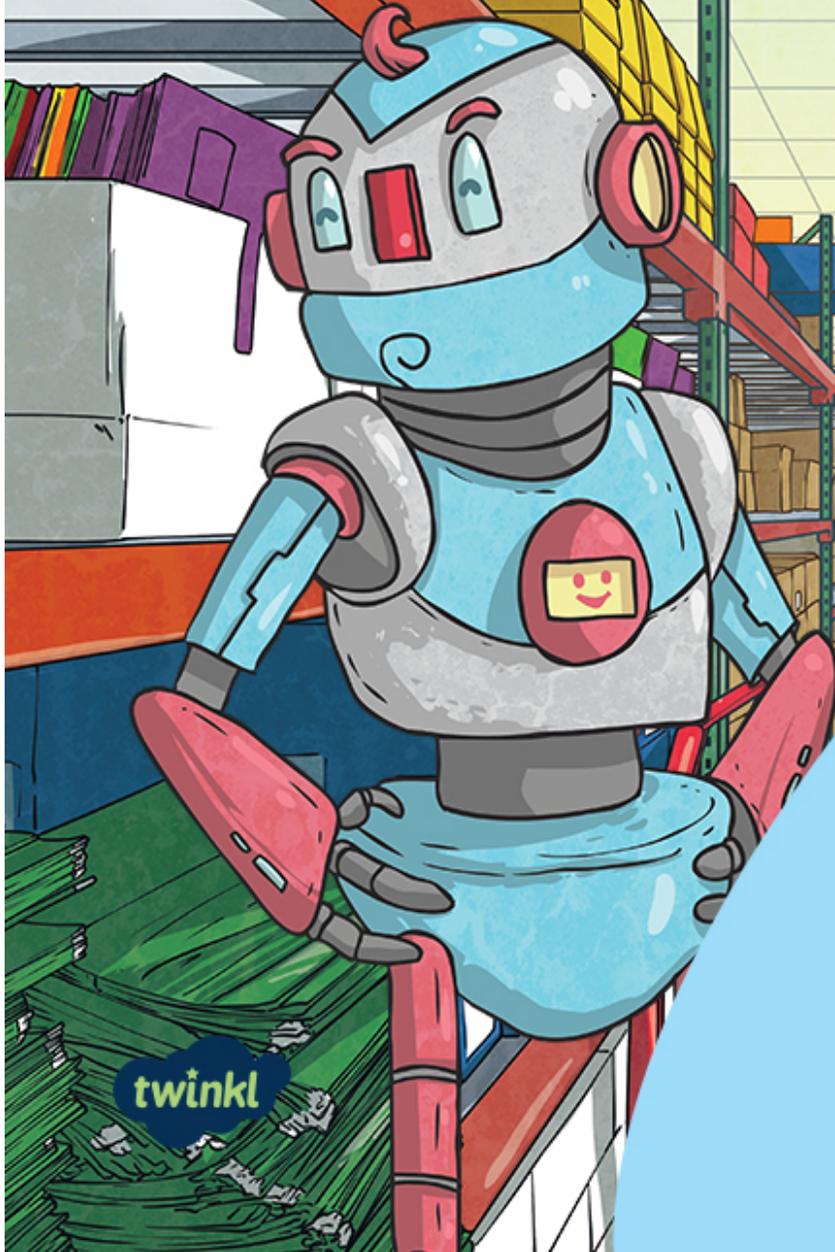


Diving into Mastery



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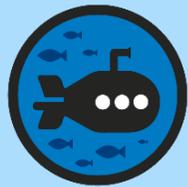
Find a Rule –
One Step

Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:



Diving



Deeper



Deepest

These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

Aim

- Use simple formulae.

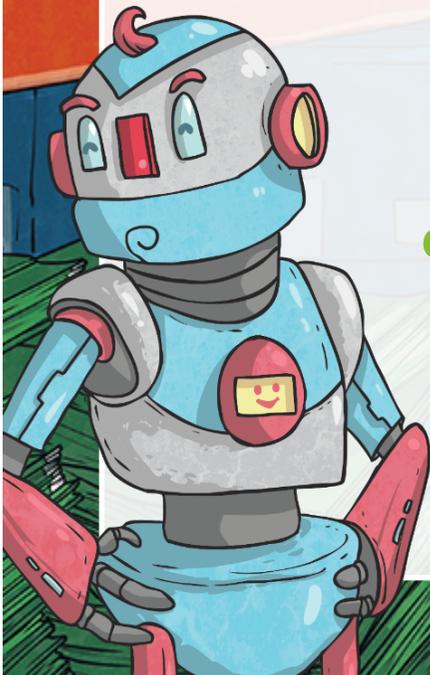
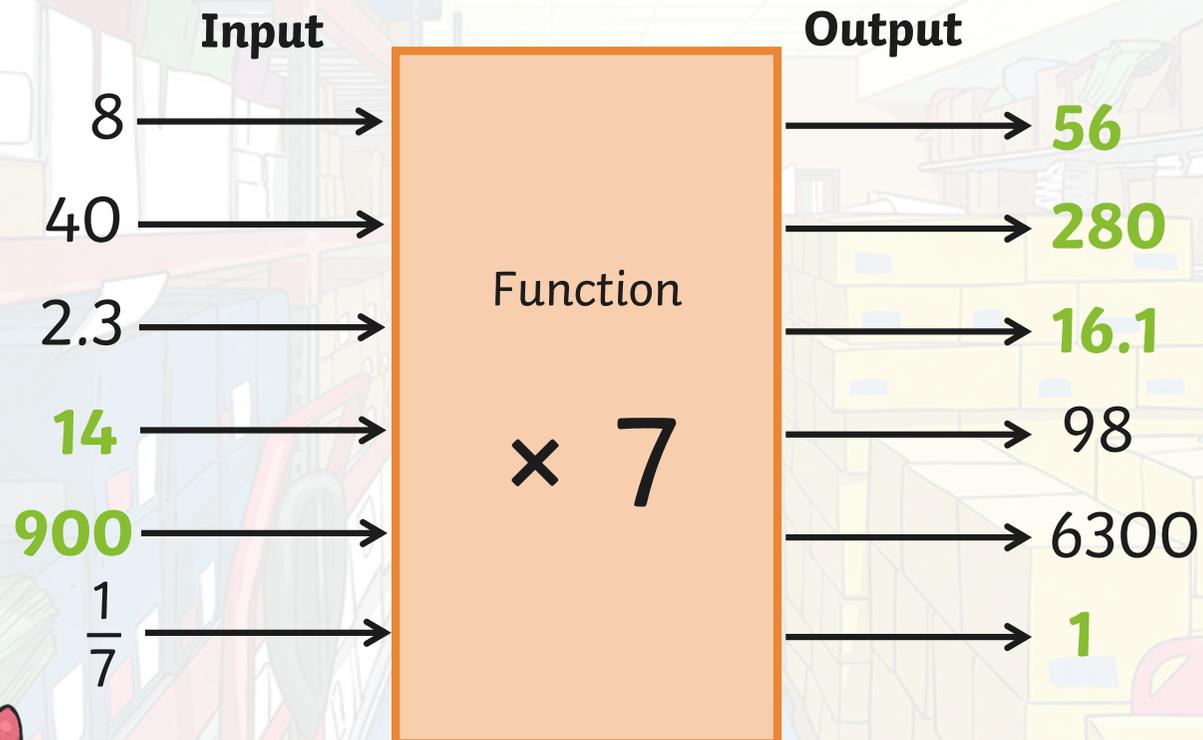


Find a Rule – One Step

Diving



This is a one-step function machine.
Give the missing inputs and outputs.

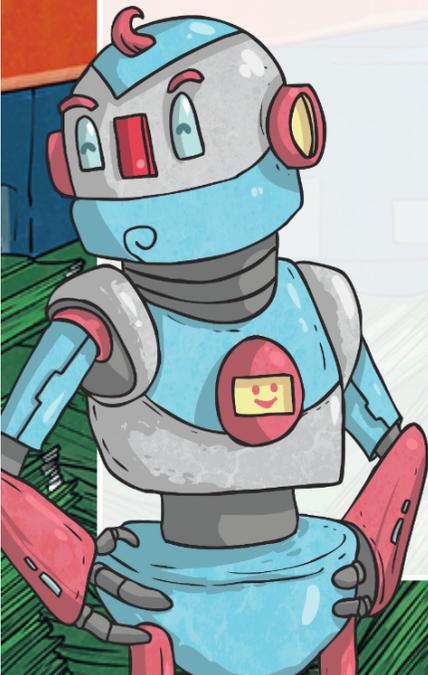


Find a Rule – One Step

Diving



Give the missing function for this one-step machine.



Find a Rule – One Step

Deeper



Do you agree or disagree with each child's statement about this function machine? Give an example to support each of your answers.

Input →

Function

- 11

→ Output

Emily is correct. When we subtract an odd number from an odd number, we will always get an even number.

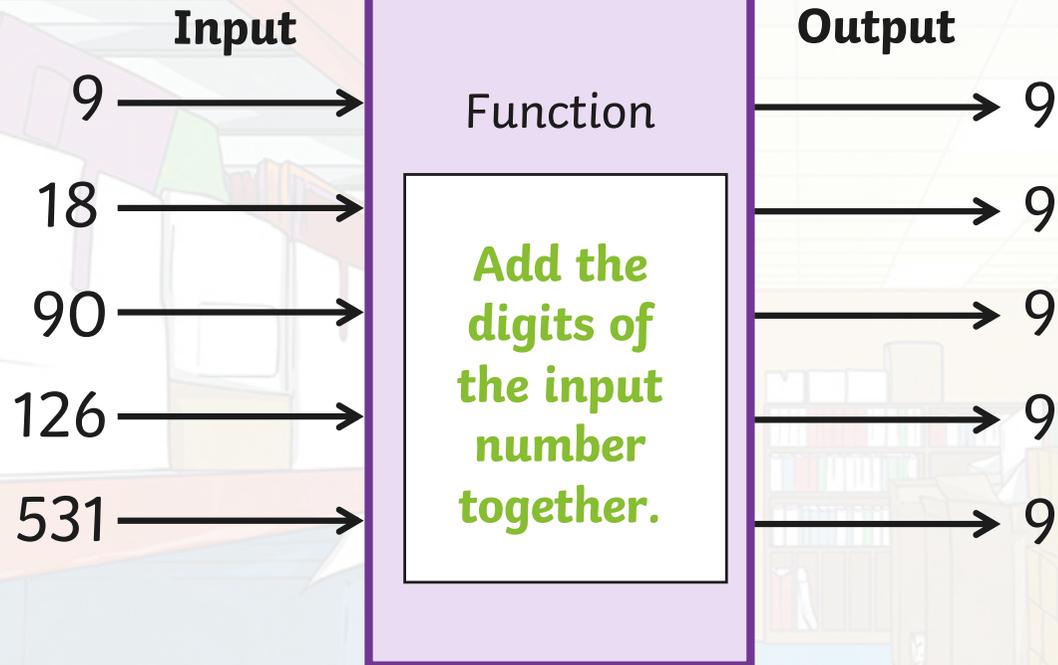
Charlie is incorrect. If we inputted the number 10, for example, then the function machine would give an output of -1 which is less than 11.

Charlie

Emily

Find a Rule – One Step

Deeper



I think this function machine has malfunctioned as the output is always the same for whichever number has been input.



Is Dimitri's statement correct? Explain your reasoning.

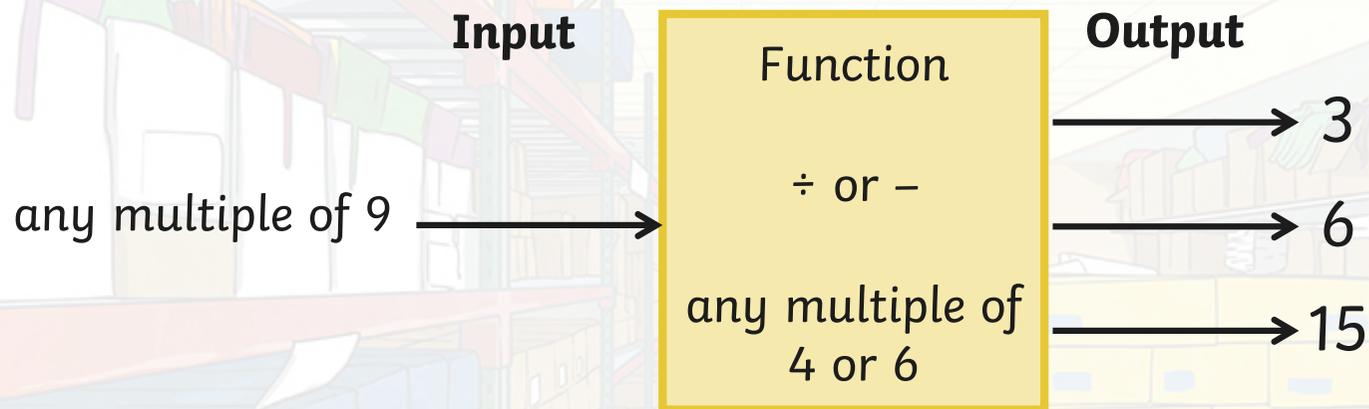
Dimitri is incorrect as the function machine adds the digits of the input number together. Every number inputted so far has a digit sum of 9.

Find a Rule – One Step

Deepest



The function machine has put out three numbers. Following the rules of the function machine, find two different ways to make each output.



Answers will vary. Example answers shown:

$$\underline{9 - 6 = 3}$$

$$\underline{36 \div 12 = 3}$$

$$\underline{18 - 12 = 6}$$

$$\underline{36 \div 6 = 6}$$

$$\underline{27 - 12 = 15}$$

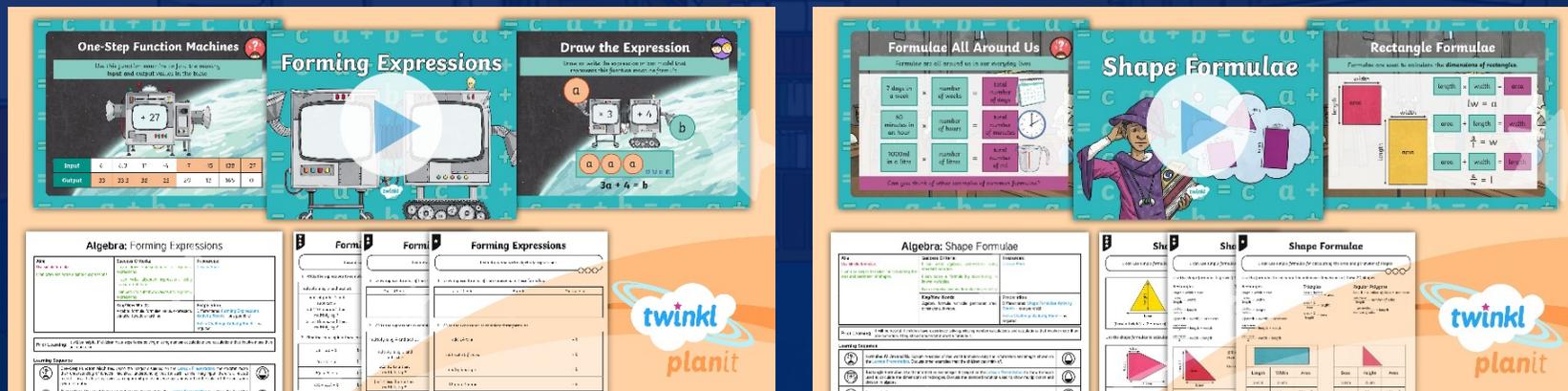
$$\underline{90 \div 6 = 15}$$

Need Planning to Complement this Resource?

National Curriculum Aim

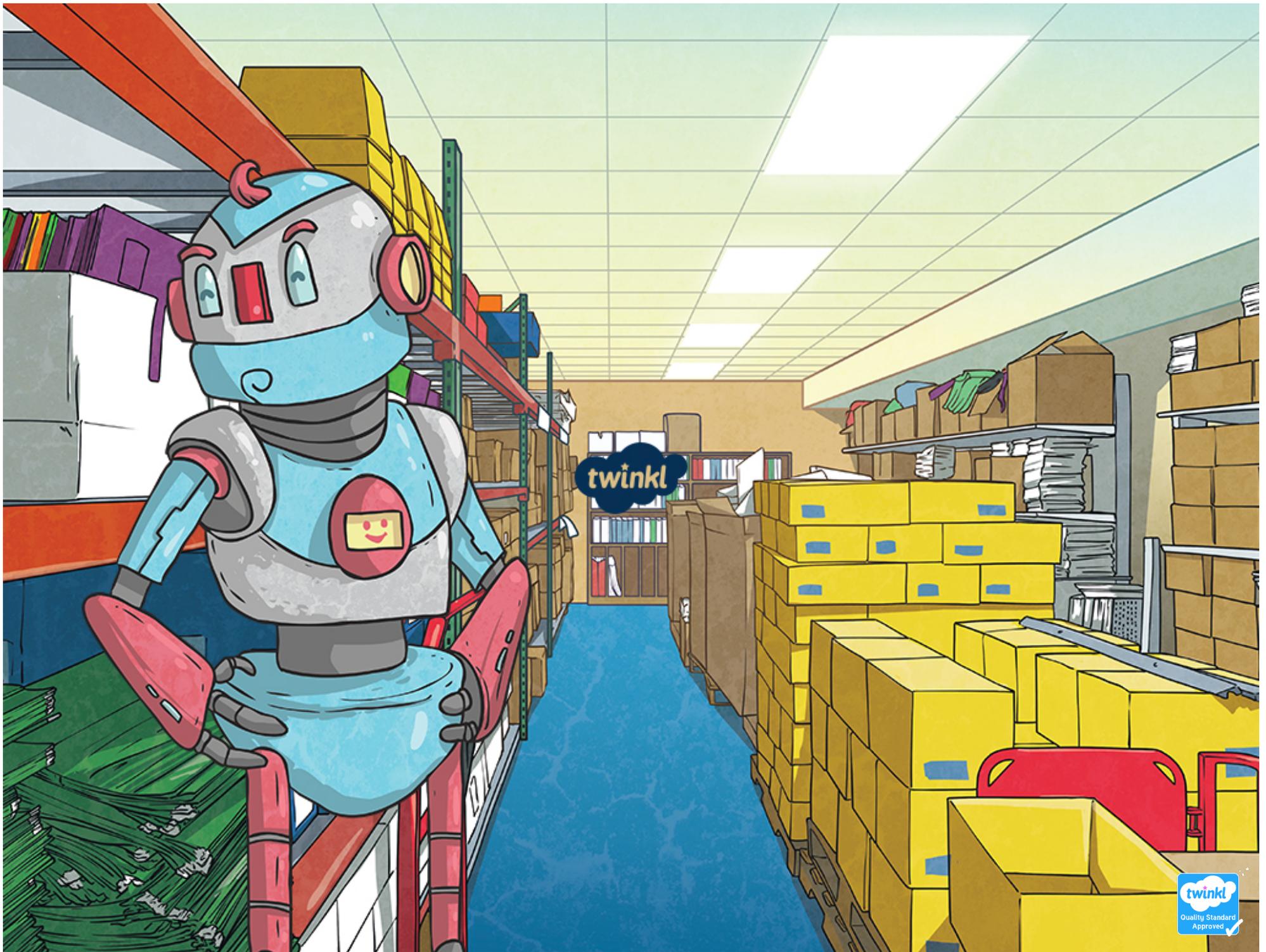
Use simple formulae.

For more planning resources to support this aim, [click here](#).



Twinkl Planit is our award-winning scheme of work with over 4000 resources.





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