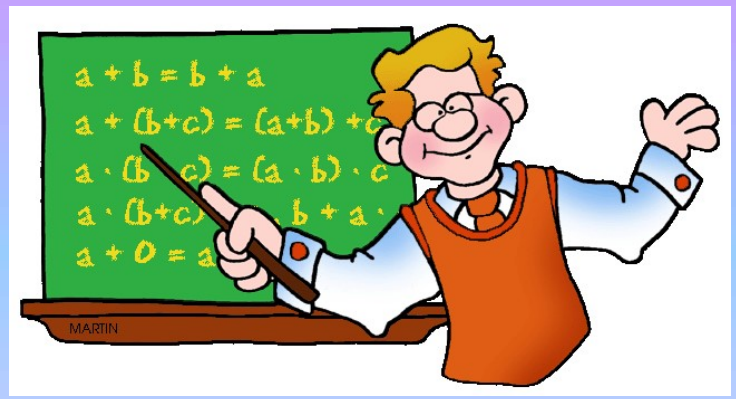
Prime Numbers and Prime Factors



Identify the prime numbers in the grid below. There are 7 to find.

7	39	45	28	23
63	51	17	81	9
27	11	77	19	99
1	60	2	49	37

Identify the prime numbers in the grid below. There are 7 to find.

127	129	133	303	313
415	57	199	117	213
93	449	111	367	453
1	666	137	183	919

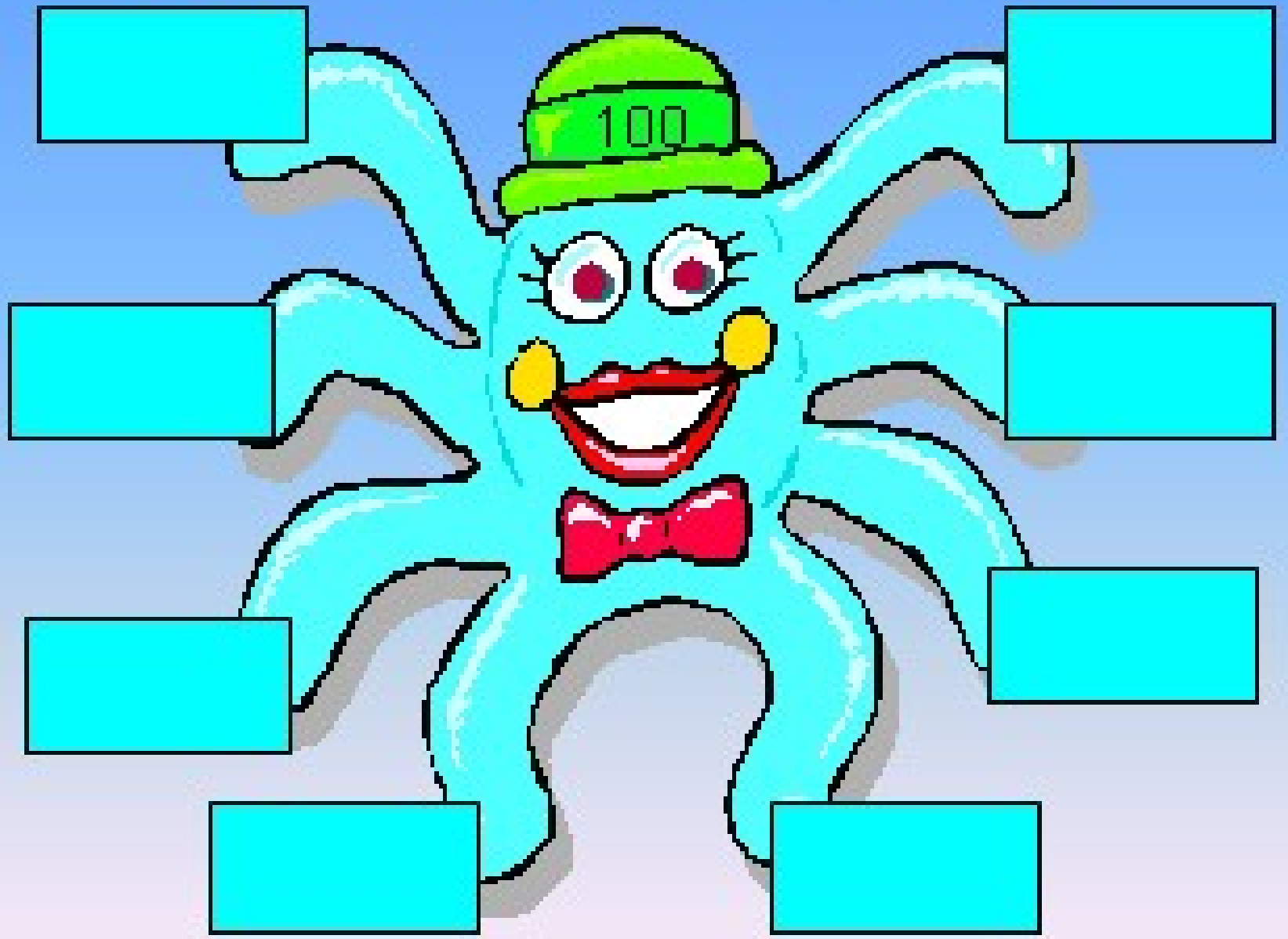
Success Criteria

I can find factors of integers
e.g. find the factors of 20

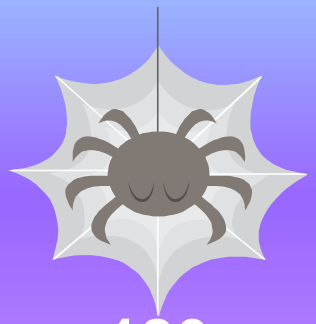
I understand what a prime number is
e.g. What are the first 5 prime numbers

I can draw a factor tree to find prime factors
e.g. find the prime factors of 20

Ollie Octopus : What are all the factors of this number?



Investigate



180

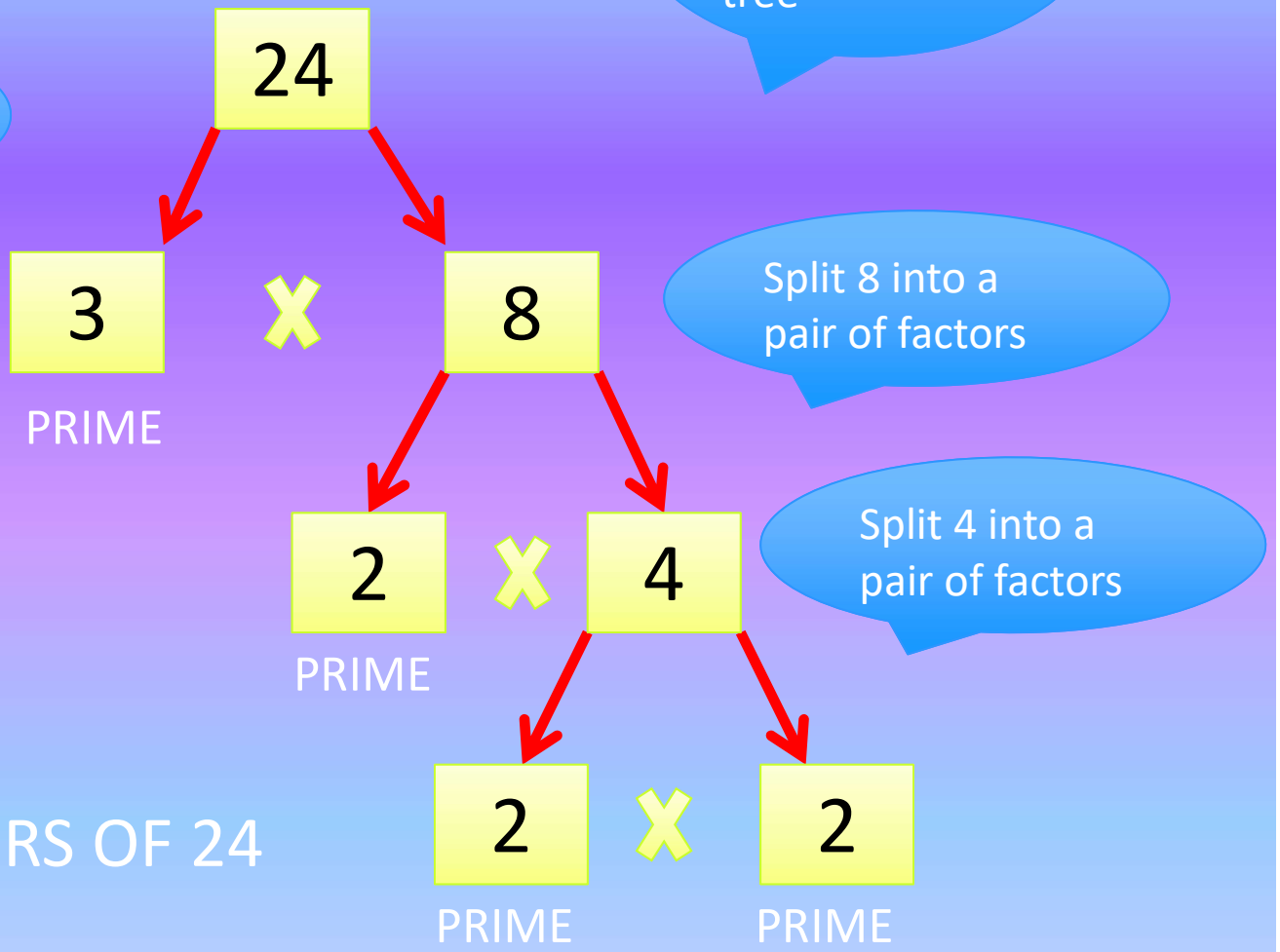
429

PRIME FACTOR TREE

Find the Prime Factors of 24

To find the Prime Factors draw a factor tree

Split 24 into a pair of factors



Split 8 into a pair of factors

Split 4 into a pair of factors

THE PRIME FACTORS OF 24 ARE :

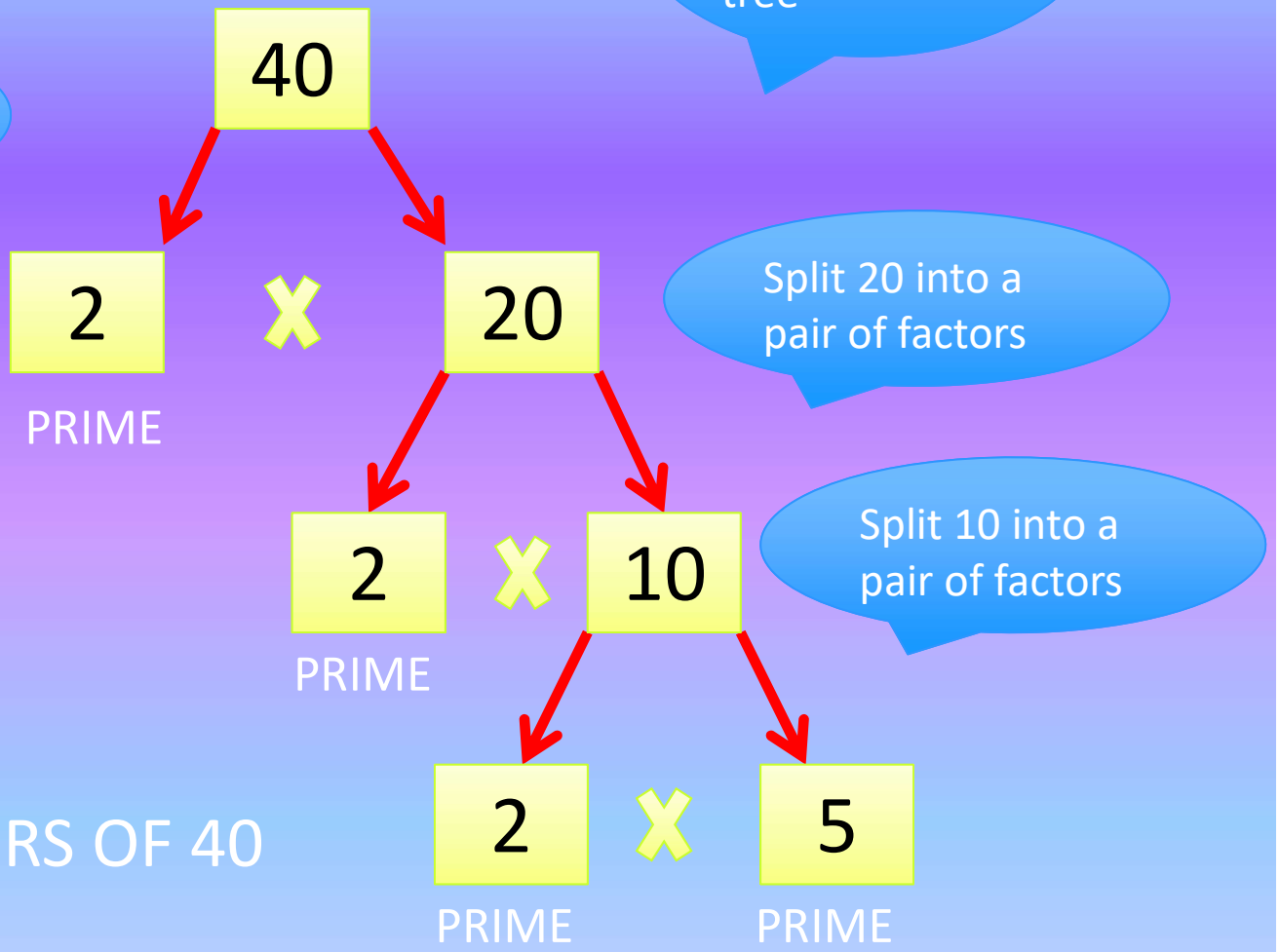
2 X 2 X 2 X 3

PRIME FACTOR TREE

Find the Prime Factors of 40

To find the Prime Factors draw a factor tree

Split 40 into a pair of factors



Split 20 into a pair of factors

Split 10 into a pair of factors

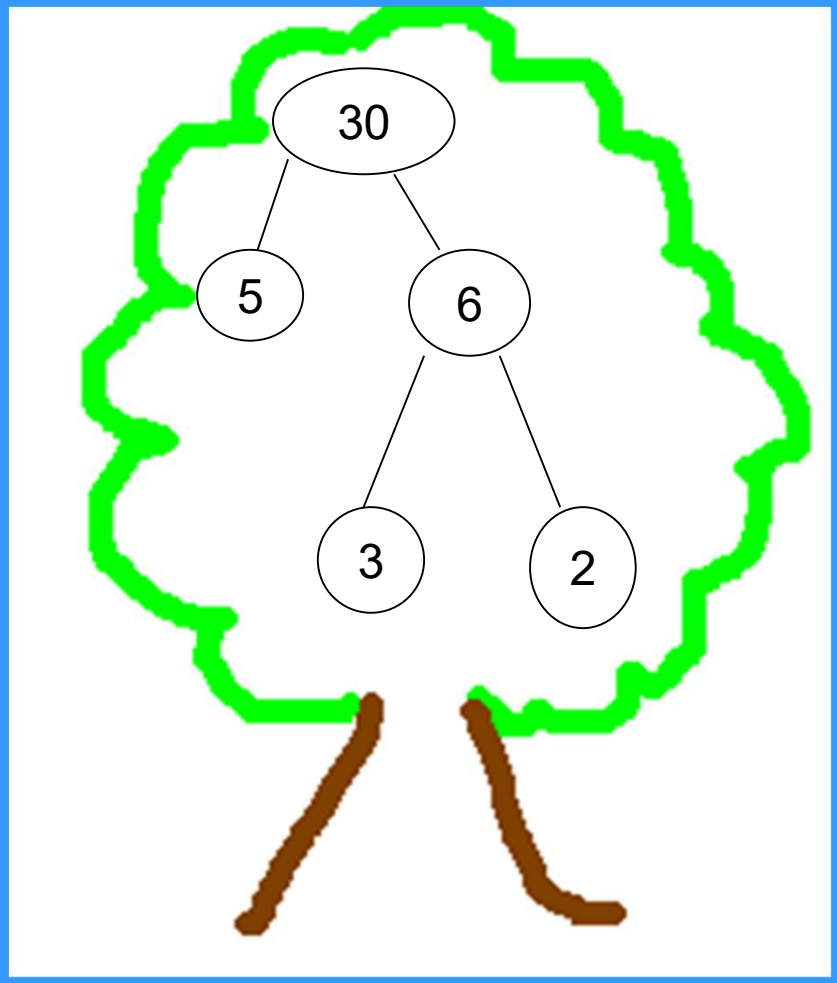
THE PRIME FACTORS OF 40 ARE :

2 X 2 X 2 X 5

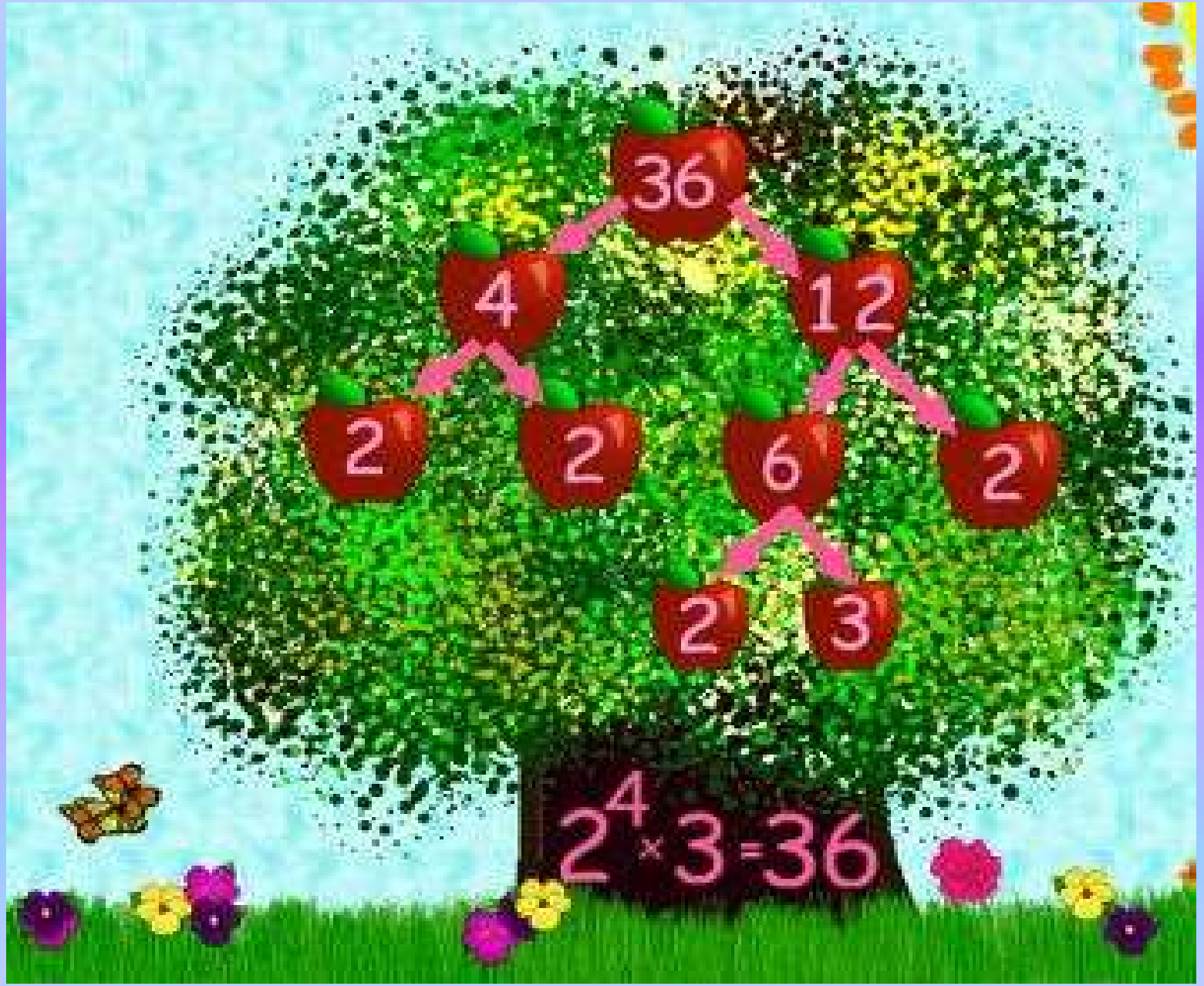
You try !!!

Trees ?

- Some people say they look like trees ….
- This is a good way to see them to help you set them out. Each stage is like a branch.



30 = 5x 3 x 2


36
4
12
2
2
6
2
2
3
$2^4 \times 3 = 36$

Top Secret Mission

Your mission should you choose to accept it is …to investigate further these prime factors.

Lets hear from our leader…..

- Welcome agents your task today is to investigate how numbers can be written as products of their prime factors.
- I have seen you have already had a go at this and seem very confident.

Level 5

- Investigate numbers up to 100 – and show them as a prime factor tree and a product of their prime factors in your books.

- Good Luck.

Level 6

- Begin your mission and I will give you further instructions later in the lesson …..

- Remember to express your prime factors in index notation form.

- This message will self destruct in 5 seconds ……
- Good Luck


BOOM !

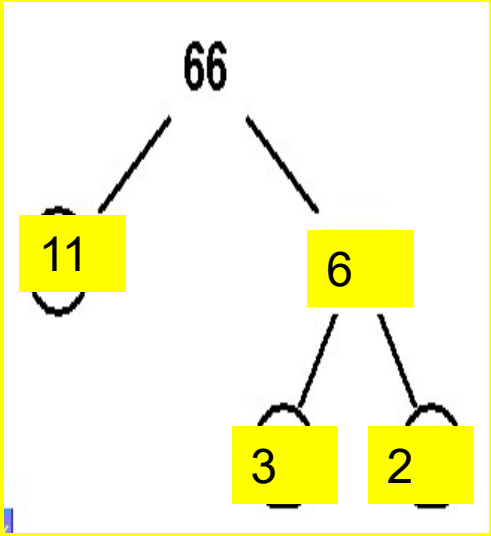
End Question ?

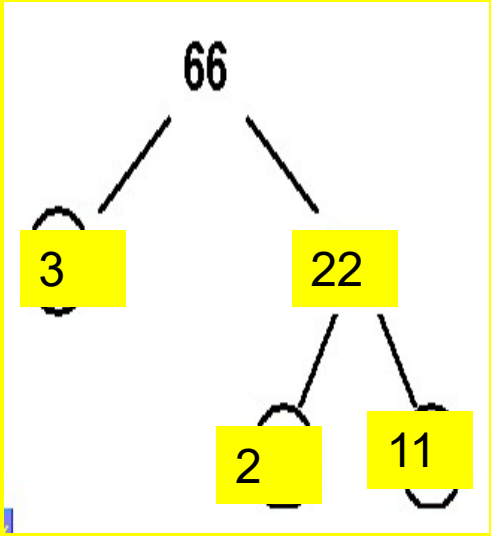
All odd numbers are the sum of 3 prime numbers – is it true?

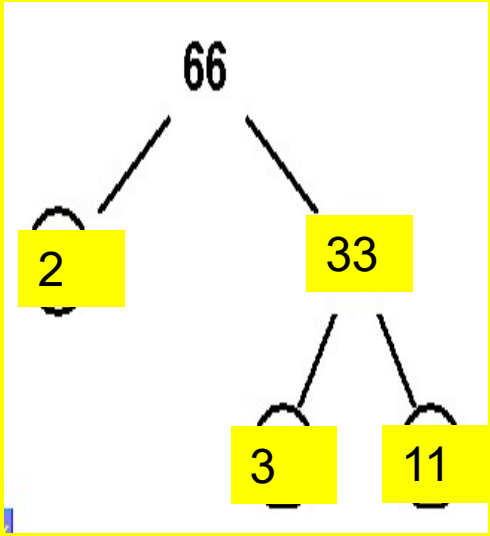
Sometimes **Always** **Never**

PLENARY ACTIVITY

Below are three incomplete factor trees for the number 66. Complete the factor trees in three different ways.







Success Criteria

I can find factors of integers
e.g. find the factors of 20

I understand what a prime number is
e.g. What are the first 5 prime numbers

I can draw a factor tree to find prime factors
e.g. find the prime factors of 20

Complete your exit ticket …….