

- 1) A prime number *has only 2 factors: 1 and itself.*
 A composite number *has more than 2 factors.*



2)

Prime	Composite
3	6
7	9
13	15
41	18
61	27
	33
	81

- 3) 71, 73, 79, 83, 89, 97

- 1) *Michael is incorrect, as 2 is a prime number and it is even. 2 is the only even prime number.*

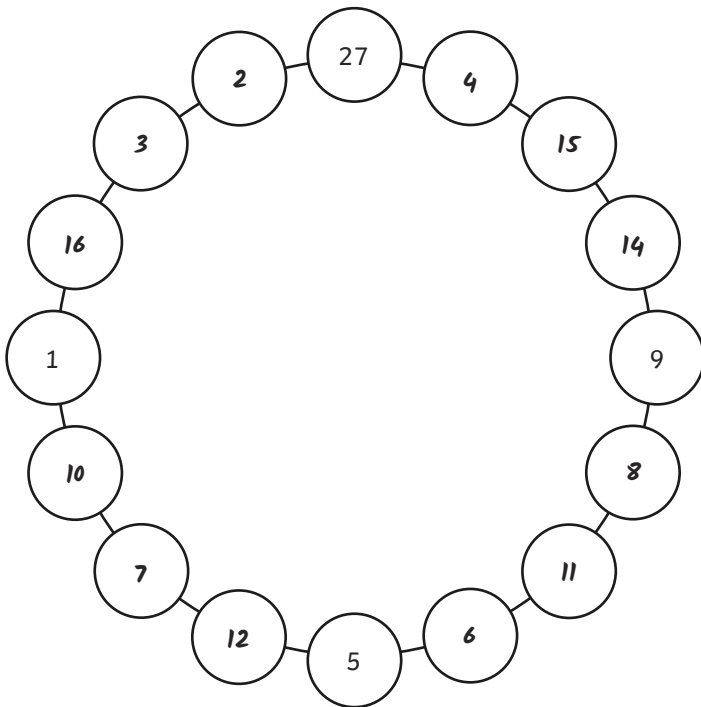
- 2) 11, 31, 41, 61, 71

- 3) 3, 13, 23, 43, 53, 73, 83



- 1) *Marc is incorrect. There are 5 numbers that fit all the criteria: 23, 29, 41, 43 and 47. They are all greater than 20, less than 60 and they are all prime. Their digit sums are all odd.*

- 2) *This is one possible solution:*





1) Finish the definitions:

A prime number _____

A composite number _____

2) Sort the numbers correctly to show whether they are prime or composite numbers.

3, 6, 7, 9, 13, 15, 18, 27, 33, 41, 61, 81

Prime	Composite

3) Find all the prime numbers between 70 and 100 and list them below.

1) Michael says,

'All prime numbers are odd.'



Do you agree? Explain your thinking.

2) What number am I?

Use the clues to find all the possible numbers. You might want to use a hundred square to help you.

I am a prime number less than 100.

I am 1 more than a multiple of 10.

3) What number am I?

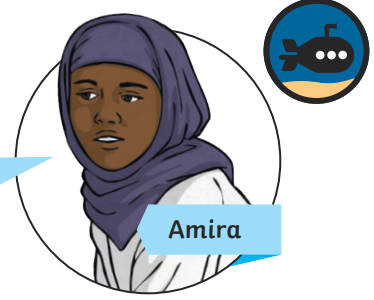
I am a prime number less than 100.

I am 2 less than a multiple of 5.

1) Amira sets a challenge for her friend Marc.

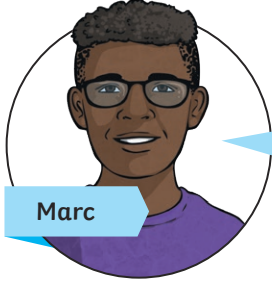
Can you find all the possible numbers she could be thinking of?

I am thinking of a number. It is higher than 20. It is less than 60. It is a prime number. The sum of its digits is an odd number.



Amira

Is Marc correct? Explain your reasoning.



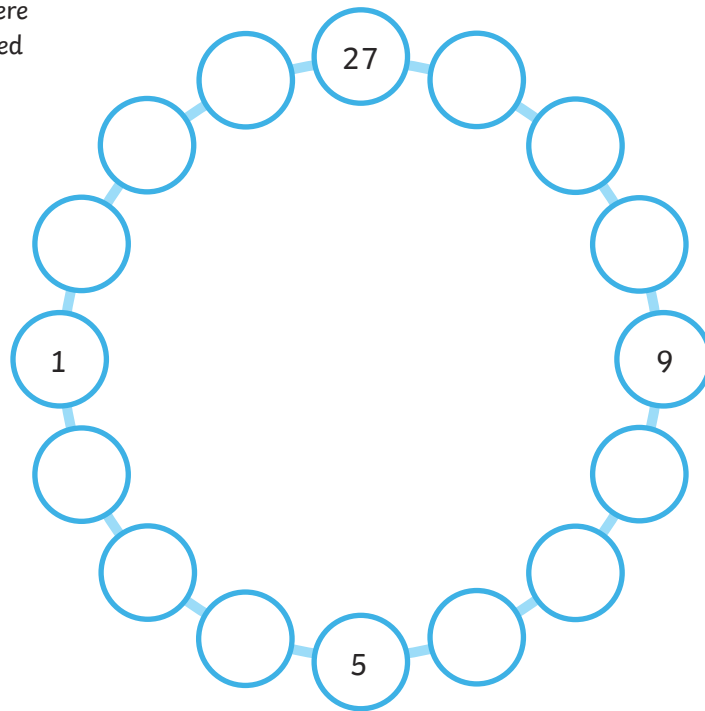
Marc

There are three possibilities.

2) Can you arrange the numbers in the circles so that each adjoining pair adds to make a prime number?

2, 3, 4, 6, 7, 8, 10, 11, 12, 14, 15, 16

Top Tip: think about where the odd numbers will need to be placed.



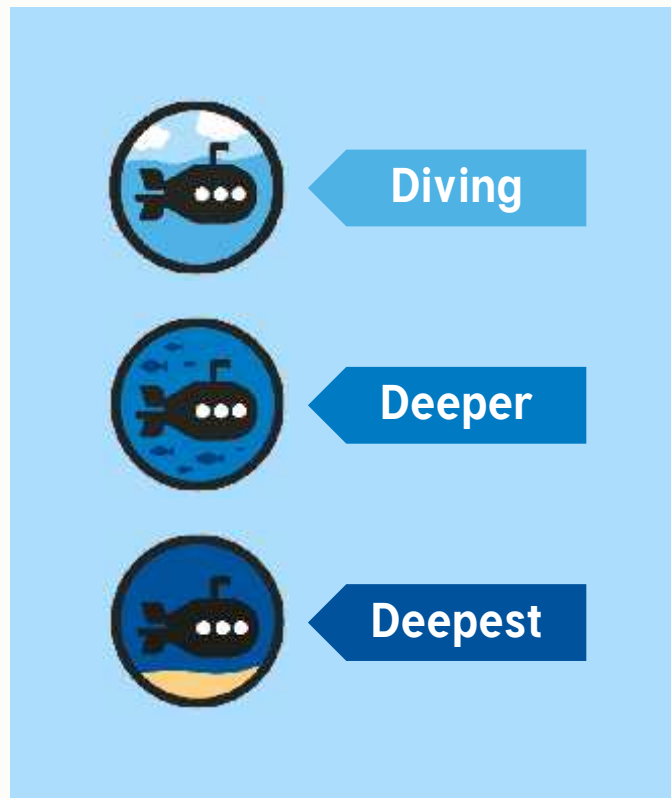
Diving into Mastery



Prime Numbers

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:



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

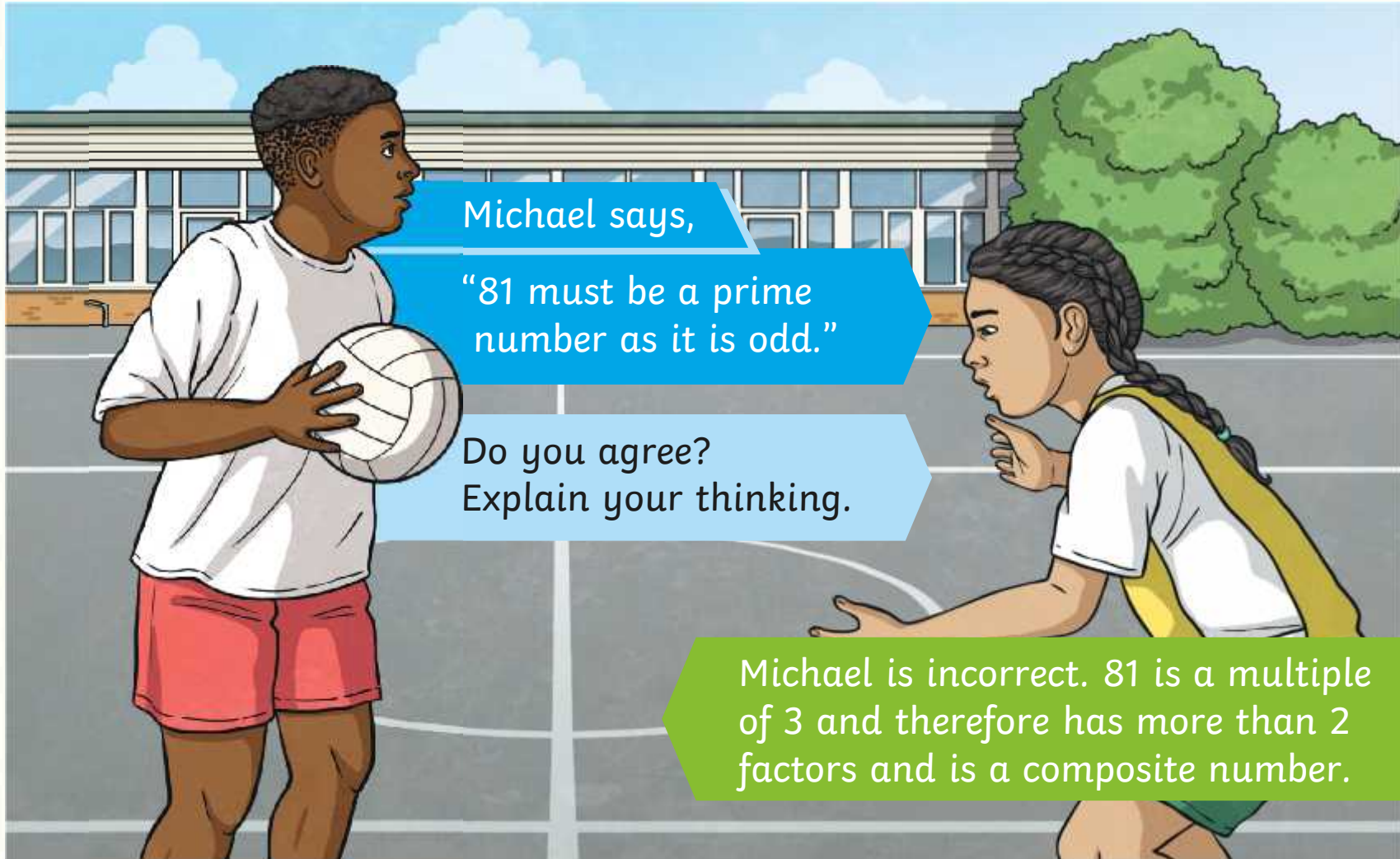
- Establish whether a number up to 100 is prime and recall prime numbers up to 19.

A blue pencil with a yellow eraser and a sharp lead tip, positioned diagonally on the left side of the wooden background.

Sort the numbers correctly to show whether they are prime or composite numbers.

Prime	Composite (Non-Prime)
2	12
7	21
17	32
29	82
41	
67	

2, 7, 12,
17, 21, 29, 32,
41, 67, 82



Michael says,

“81 must be a prime number as it is odd.”

Do you agree?
Explain your thinking.

Michael is incorrect. 81 is a multiple of 3 and therefore has more than 2 factors and is a composite number.



What number am I?

Use the clues to find all the possible numbers.
You might want to use a hundred square to help you.

I am a prime number less than 100.
I am 2 less than a multiple of 25.
What number am I?

I am **29, 43 or 71**.

I am a prime number less than 100.
I am 1 more than a multiple of 7.
What number am I?

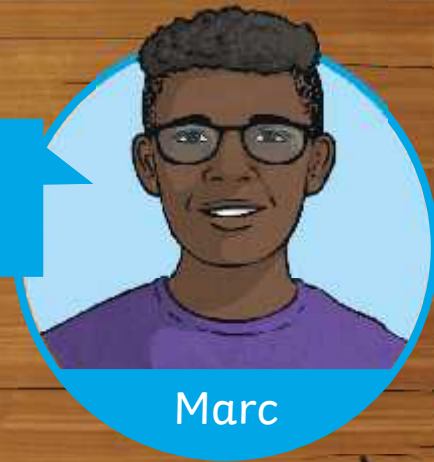


Amira sets a challenge for her friend Marc.

I am thinking of a number. It is greater than 50. It is less than 80. It is a prime number. The sum of its digits is an odd number.

Can you find all the possible numbers she could be thinking of?

There are four possibilities.



Marc

Is Marc correct?
Explain your reasoning.

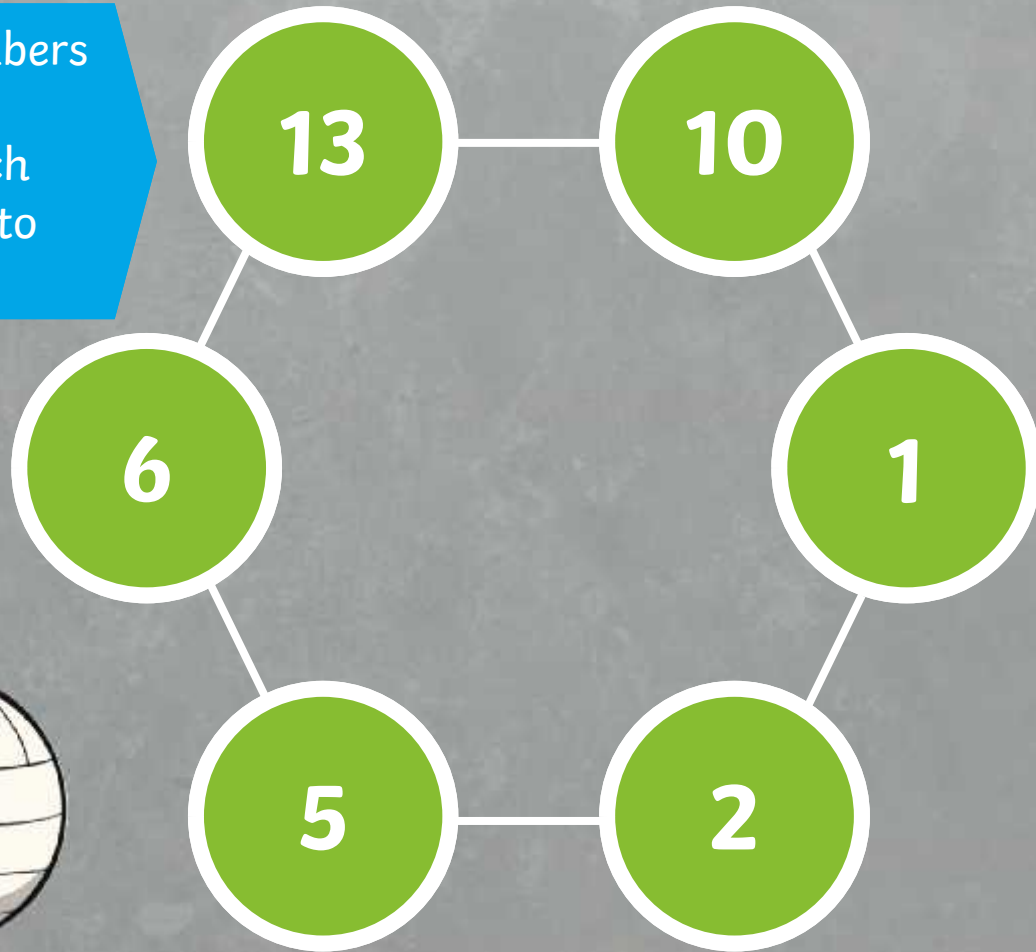
Marc is incorrect. There are two numbers that fit all the criteria: 61 and 67. They are both greater than 50, less than 80 and they are both prime. Their digit sums are both odd.





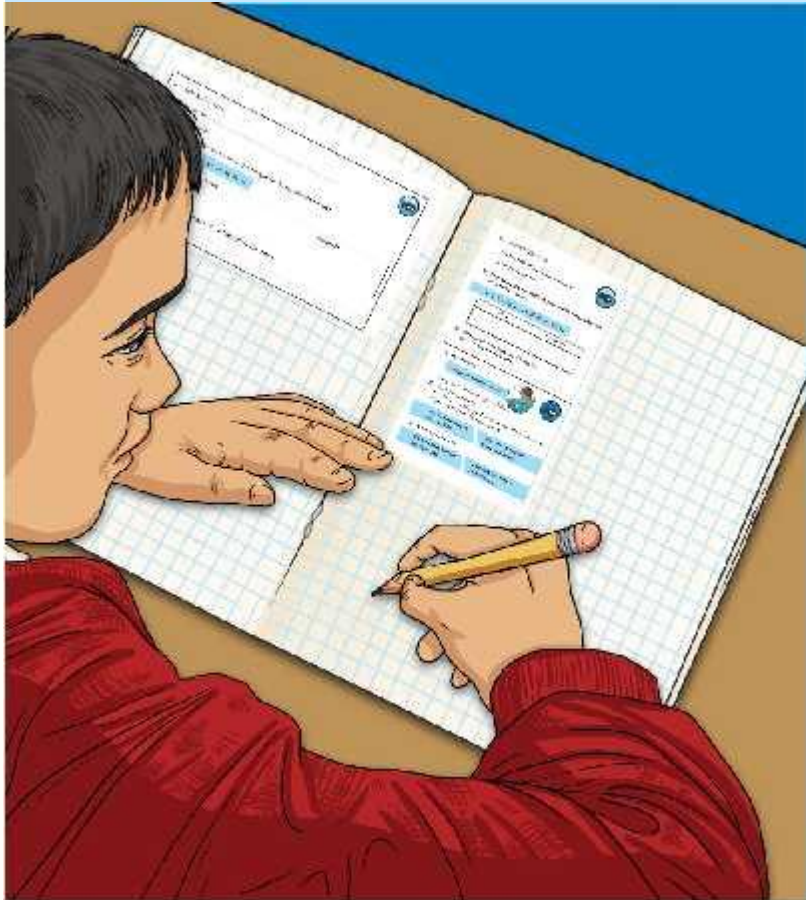
Can you arrange the numbers in the circles so that each adjoining pair (pairs which are joined together) adds to make a prime number?

10, 2,
5, 1, 6, 13



Prime Numbers

Dive in by completing your own activity!



A screenshot of a digital learning activity interface. The interface is white with blue accents. It features a sidebar on the left with a list of activities. The main content area contains several sections, each with a title and a description. The first section is titled "Prime Numbers" and includes a table with columns for "True" and "False". The second section is titled "Prime Numbers" and includes a small circular profile picture of a person. The third section is titled "Prime Numbers" and includes a small circular profile picture of a person. The fourth section is titled "Prime Numbers" and includes a small circular profile picture of a person. The interface also includes a search bar at the top right and a navigation bar at the bottom.



1) Finish the definitions:

A prime number _____

A composite number _____



2) Sort the numbers correctly to show whether they are prime or composite numbers.

3, 6, 7, 9, 13, 15, 18, 27, 33, 41, 61, 81

Prime	Composite

3) Find all the prime numbers between 70 and 100 and write them in a list.

1) Finish the definitions:

A prime number _____

A composite number _____



2) Sort the numbers correctly to show whether they are prime or composite numbers.

3, 6, 7, 9, 13, 15, 18, 27, 33, 41, 61, 81

Prime	Composite

3) Find all the prime numbers between 70 and 100 and write them in a list.

1) Michael says,

'All prime numbers are odd.'



Do you agree? Explain your thinking.

2) What number am I?
Use the clues to find all the possible numbers.
You might want to use a hundred square to help you.

I am a prime number less than 100.

I am 1 more than a multiple of 10.

3) What number am I?

I am a prime number less than 100.

I am 2 less than a multiple of 5.

1) Michael says,

'All prime numbers are odd.'



Do you agree? Explain your thinking.

2) What number am I?
Use the clues to find all the possible numbers.
You might want to use a hundred square to help you.

I am a prime number less than 100.

I am 1 more than a multiple of 10.

3) What number am I?

I am a prime number less than 100.

I am 2 less than a multiple of 5.

1) Amira sets a challenge for her friend Marc.



Amira

I am thinking of a number. It is higher than 20. It is less than 60. It is a prime number. The sum of its digits is an odd number.

Can you find all the possible numbers she could be thinking of?

Is Marc correct?
Explain your reasoning.

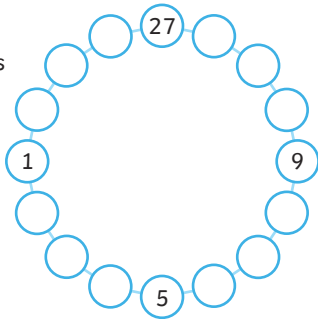
There are three possibilities.



Marc

2) Can you arrange the numbers in the circles so that each adjoining pair adds to make a prime number?

2, 3, 4, 6, 7, 8, 10,
11, 12, 14, 15, 16



Top Tip: think about where the odd numbers will need to be placed.

1) Amira sets a challenge for her friend Marc.



Amira

I am thinking of a number. It is higher than 20. It is less than 60. It is a prime number. The sum of its digits is an odd number.

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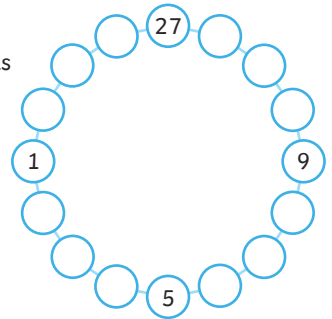
There are three possibilities.



Marc

2) Can you arrange the numbers in the circles so that each adjoining pair adds to make a prime number?

2, 3, 4, 6, 7, 8, 10,
11, 12, 14, 15, 16



Top Tip: think about where the odd numbers will need to be placed.