

- 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.*

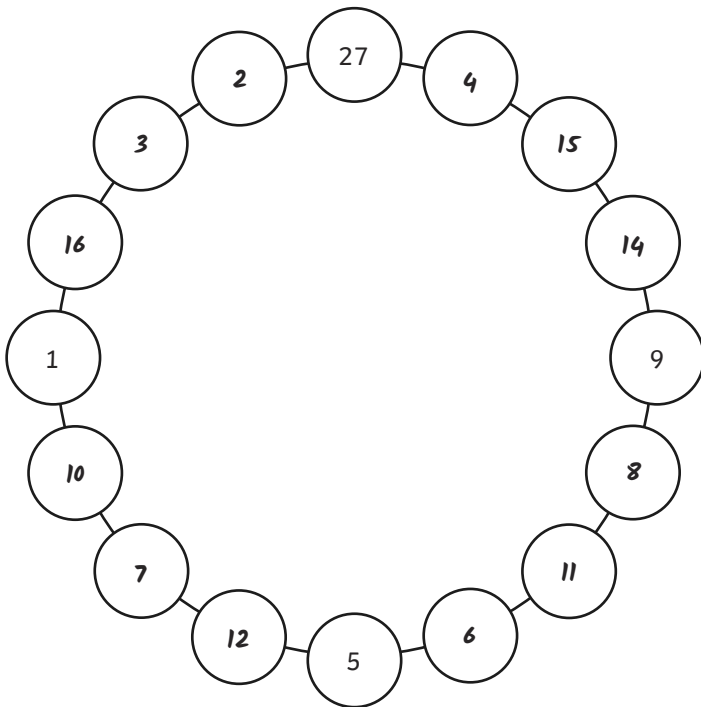
- 2) 11, 31, 41, 61, 71

- 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?

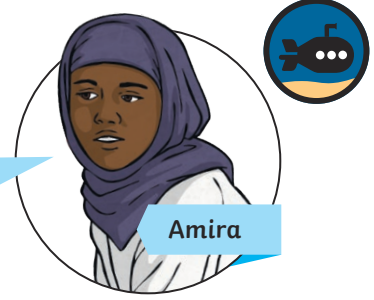
I am a prime number less than 100.

I am 2 less than a multiple of 5.

1) Amira sets a challenge for her friend Marc.

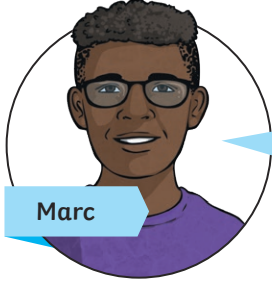
Can you find all the possible numbers she could be thinking of?

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.



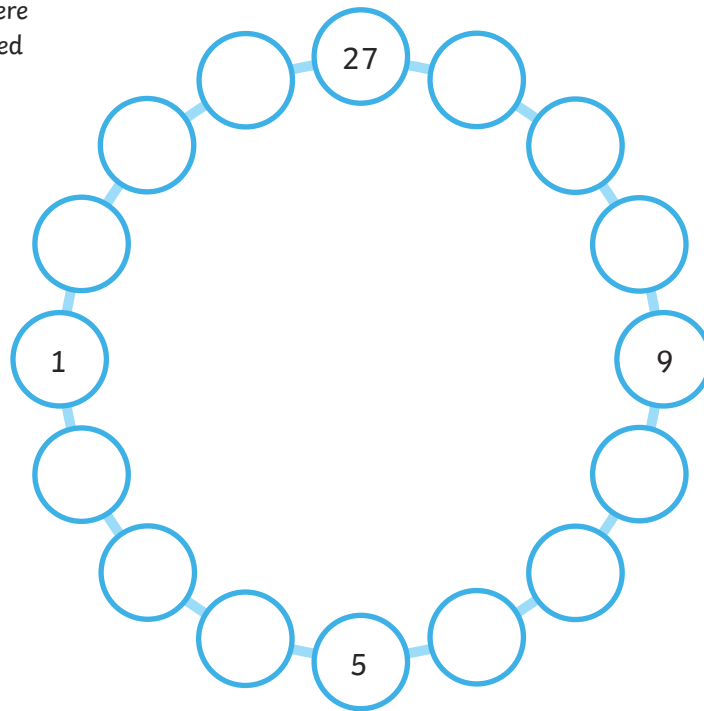
Marc

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.



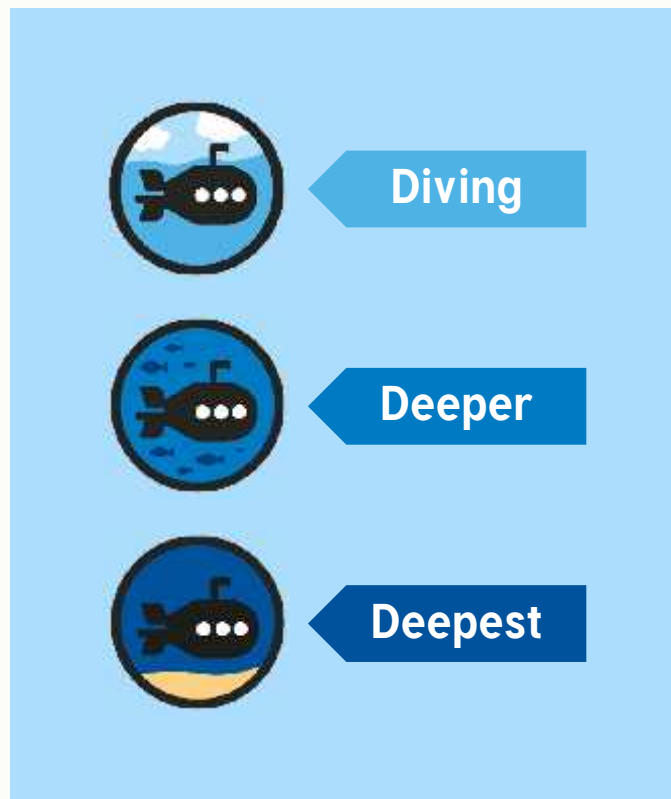
Diving into Mastery



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:

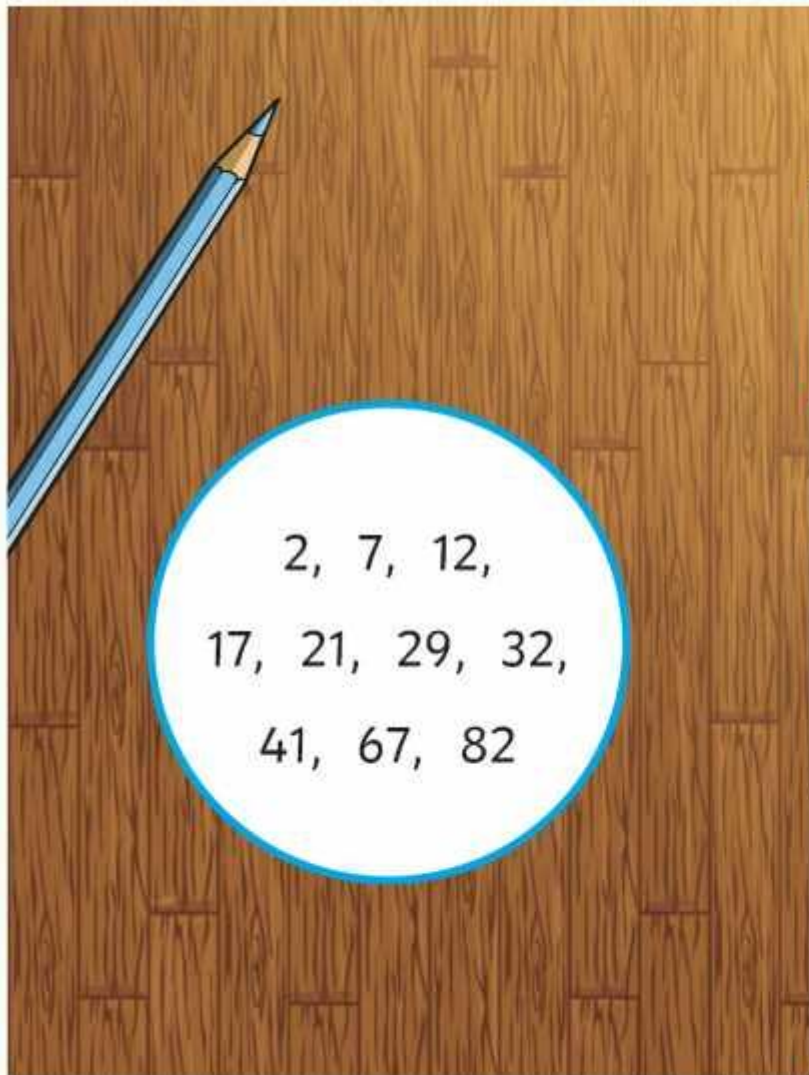


These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

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.

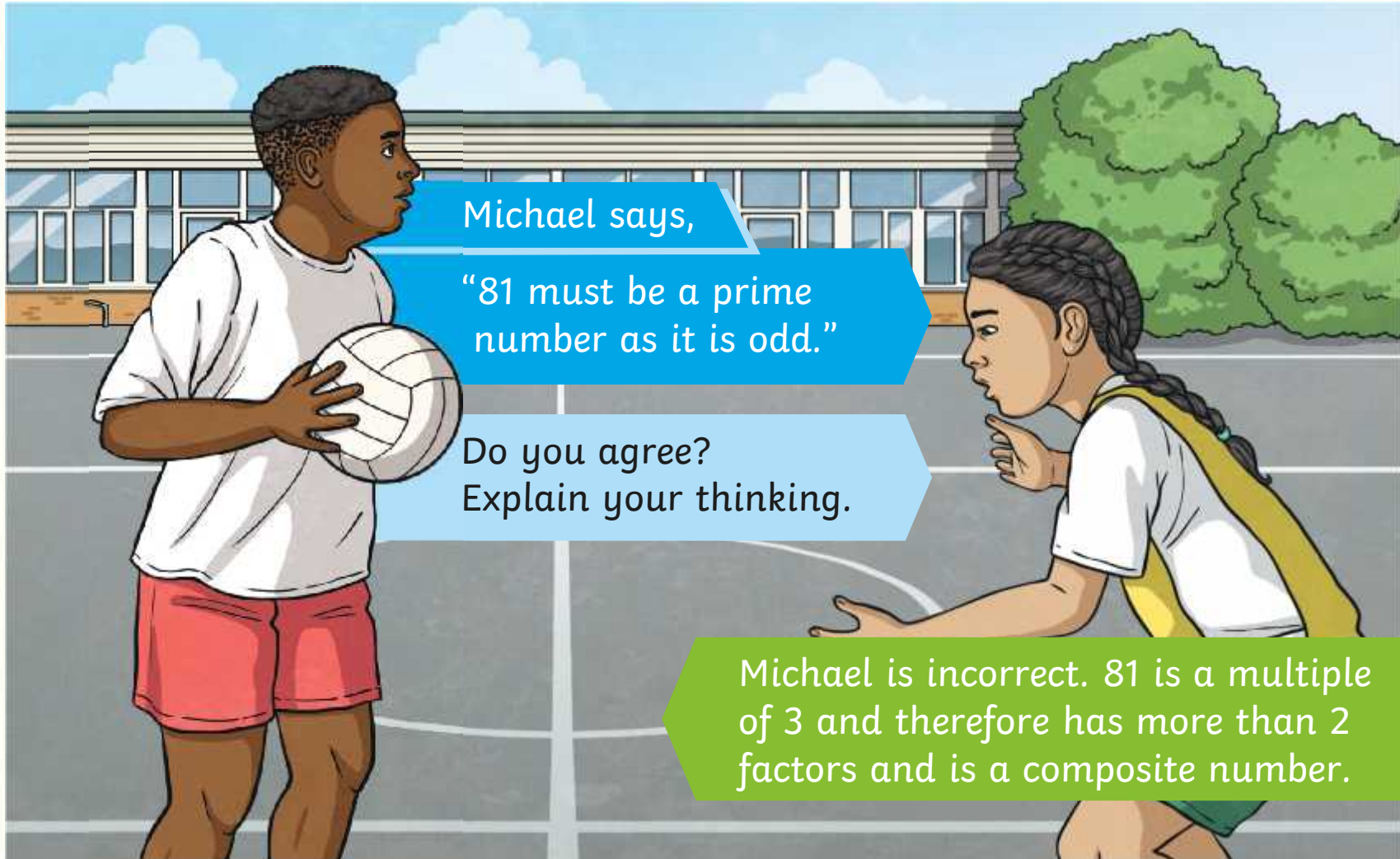
Aim

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



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	



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?

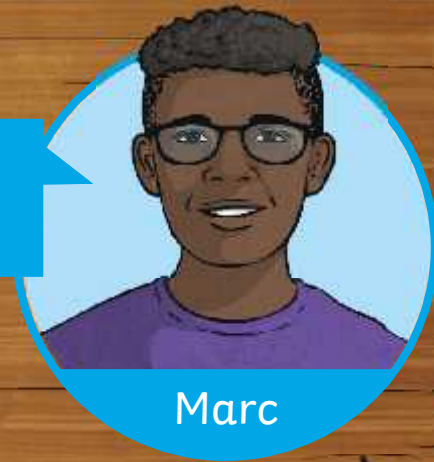


Amira sets a challenge for her friend Marc.

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.

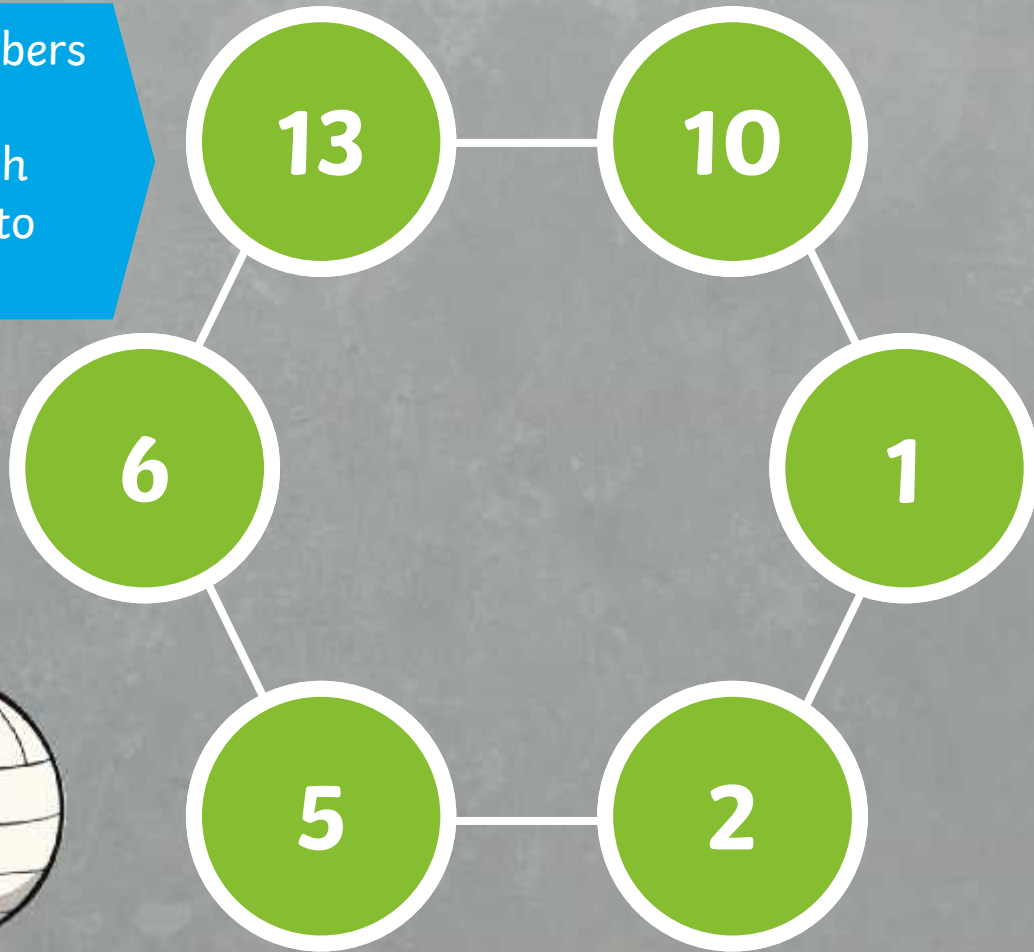
Marc is incorrect. There are two numbers that fit all the criteria: 61 and 67. They are both greater than 50, less than 80 and they are both prime. Their digit sums are both odd.





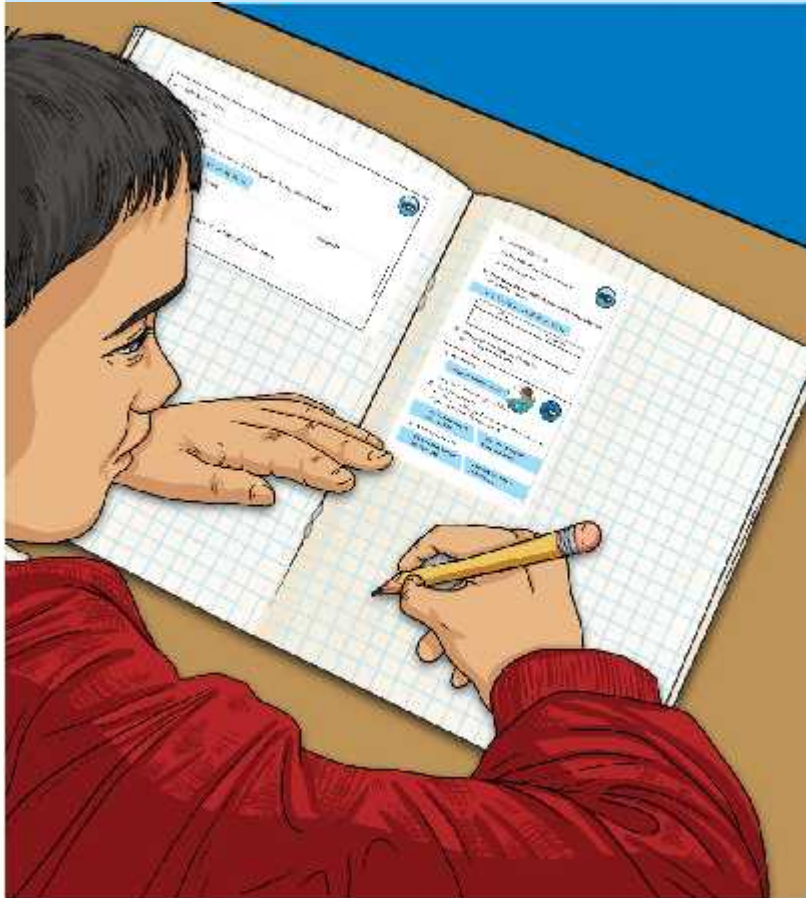
Can you arrange the numbers in the circles so that each adjoining pair (pairs which are joined together) adds to make a prime number?

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 contains several sections with text and input fields. On the right side, there are two circular profile pictures of students. The text is partially obscured by blue highlights. The interface appears to be a worksheet or a set of questions related to prime numbers.

30. A number is prime if it has only two factors, 1 and itself. List the prime numbers between 1 and 100.

31. Write the first five prime numbers.

32. Write the first five composite numbers.

33. Write the first five even numbers.

34. Write the first five odd numbers.

35. Write the first five multiples of 2.

36. Write the first five multiples of 3.

37. Write the first five multiples of 4.

38. Write the first five multiples of 5.

39. Write the first five multiples of 6.

40. Write the first five multiples of 7.

41. Write the first five multiples of 8.

42. Write the first five multiples of 9.

43. Write the first five multiples of 10.

44. Write the first five multiples of 11.

45. Write the first five multiples of 12.

46. Write the first five multiples of 13.

47. Write the first five multiples of 14.

48. Write the first five multiples of 15.

49. Write the first five multiples of 16.

50. Write the first five multiples of 17.

51. Write the first five multiples of 18.

52. Write the first five multiples of 19.

53. Write the first five multiples of 20.

54. Write the first five multiples of 21.

55. Write the first five multiples of 22.

56. Write the first five multiples of 23.

57. Write the first five multiples of 24.

58. Write the first five multiples of 25.

59. Write the first five multiples of 26.

60. Write the first five multiples of 27.

61. Write the first five multiples of 28.

62. Write the first five multiples of 29.

63. Write the first five multiples of 30.

64. Write the first five multiples of 31.

65. Write the first five multiples of 32.

66. Write the first five multiples of 33.

67. Write the first five multiples of 34.

68. Write the first five multiples of 35.

69. Write the first five multiples of 36.

70. Write the first five multiples of 37.

71. Write the first five multiples of 38.

72. Write the first five multiples of 39.

73. Write the first five multiples of 40.

74. Write the first five multiples of 41.

75. Write the first five multiples of 42.

76. Write the first five multiples of 43.

77. Write the first five multiples of 44.

78. Write the first five multiples of 45.

79. Write the first five multiples of 46.

80. Write the first five multiples of 47.

81. Write the first five multiples of 48.

82. Write the first five multiples of 49.

83. Write the first five multiples of 50.

84. Write the first five multiples of 51.

85. Write the first five multiples of 52.

86. Write the first five multiples of 53.

87. Write the first five multiples of 54.

88. Write the first five multiples of 55.

89. Write the first five multiples of 56.

90. Write the first five multiples of 57.

91. Write the first five multiples of 58.

92. Write the first five multiples of 59.

93. Write the first five multiples of 60.

94. Write the first five multiples of 61.

95. Write the first five multiples of 62.

96. Write the first five multiples of 63.

97. Write the first five multiples of 64.

98. Write the first five multiples of 65.

99. Write the first five multiples of 66.

100. Write the first five multiples of 67.



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A composite number _____



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

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1) Michael says,

'All prime numbers are odd.'



Do you agree? Explain your thinking.

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You might want to use a hundred square to help you.

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I am 1 more than a multiple of 10.

3) What number am I?

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1) Amira sets a challenge for her friend Marc.



Amira

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

Is Marc correct?
Explain your reasoning.

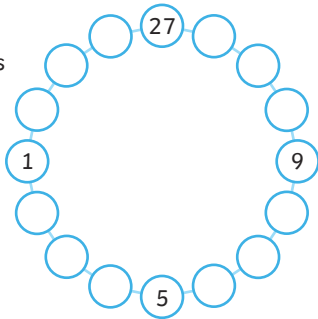
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Marc

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

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11, 12, 14, 15, 16



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

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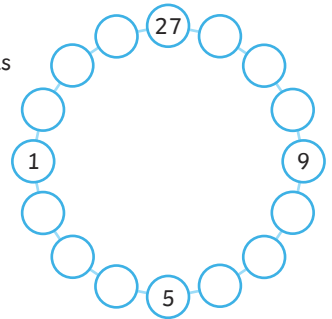
There are three possibilities.



Marc

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

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