Primes to 100

1 **a)** Find the factors of these numbers.

6   8   9

The factors of 6 are _____

The factors of 8 are _____

The factors of 9 are _____

b) Find the factors of these numbers.

3   5   7

The factors of 3 are _____

The factors of 5 are _____

The factors of 7 are _____

c) What is the same and what is different about your answers to part a) and part b)?

_____

_____

d) What do you notice about all the numbers in part b)?

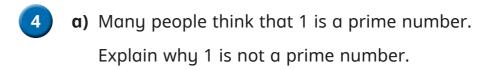Complete the sentence.

All the numbers in part b) are _____ numbers.

2 How can you prove that 18 is not a prime number?

_____

_____

_____

3 Circle the prime numbers in each list.

a)   1   2   3   4   5   6   7

b)   17   22   9   36   21   35   23

c)   10   18   38   74   92   2   14

4 **a)** Many people think that 1 is a prime number.
Explain why 1 is not a prime number.

b) Many people think that 2 is not a prime number.
Explain why people might think this.

5 Write ten numbers in the two-way table. Each section must have at least one number.

	Even	Not even
Prime		
Not prime		

6 Here is part of a hundred square.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

Cross out all the numbers that are **not** prime numbers.
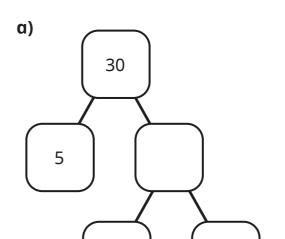
List the prime numbers between 0 and 50

_____

_____

7

I think 87 is a prime number because it is odd and most numbers that end in 7 are prime.

Do you agree with Tiny? _____

Test whether or not 87 is a prime number and show your reasoning.

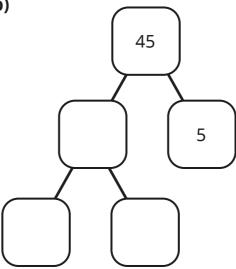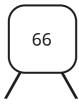**8** Complete the prime factor trees.

a)

30

5

b)

45

5

c)

36

d)

66

9 ⭐ + 🟥 = 100

Both ⭐ and 🟥 are prime numbers.

Find all the possible values for ⭐ and 🟥.