Primes to 100

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

6 8 9

b) Find the factors of these numbers.

3 5 7

c) What is the same and what is different about your answers to part a) and 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 sorting diagram. Each section must have at least one number.

	Even	Not even
Prime		
Not prime		

6

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

5 Write ten numbers in the sorting diagram. Each section must have at least one number.

	Even	Not even
Prime		
Not prime		

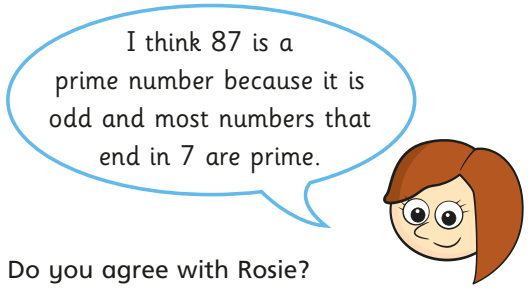
6

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

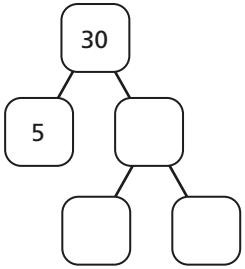


Do you agree with Rosie?

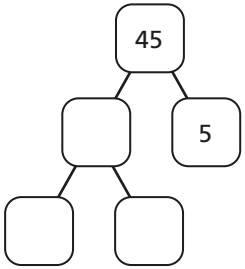
Test whether or not 87 is a prime number and show your reasoning.

8 Complete the prime factor trees.

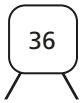
a)



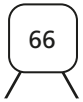
b)



c)



d)



9 ★ + ■ = 100

Both ★ and ■ are prime numbers.

How many different solutions can you find?