

**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)?

\_\_\_\_\_

\_\_\_\_\_

Complete the sentence.

All the numbers in part b) are \_\_\_\_\_ numbers.



**2** How you can 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

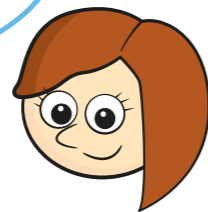
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7

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



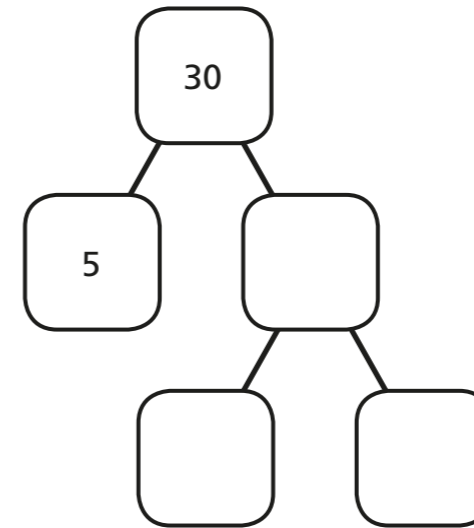
Do you agree with Rosie? \_\_\_\_\_

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

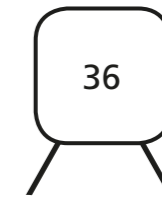
8

Complete the prime factor trees.

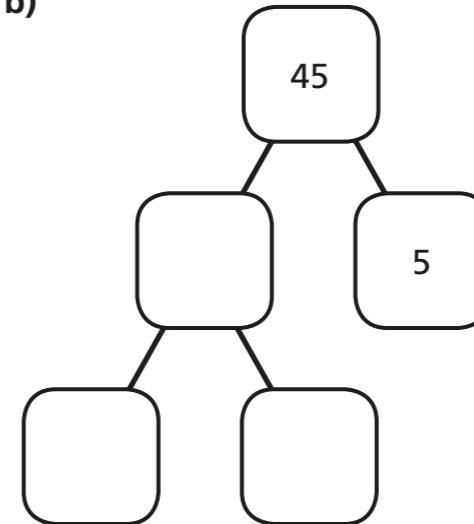
a)



c)



b)



d)



9

$$\star + \blacksquare = 100$$

Both  $\star$  and  $\blacksquare$  are prime numbers.

How many different solutions can you find?