

Common factors

1 a) Use 18 counters or cubes.

Make as many different arrays as possible, using all the cubes or counters.

Use your arrays to help you list the factors of 18

The factors of 18 are _____

b) Use 24 counters or cubes.

Make as many different arrays as possible, using all the cubes or counters.

Use your arrays to help you list the factors of 24

The factors of 24 are _____

c) What are the common factors of 18 and 24?

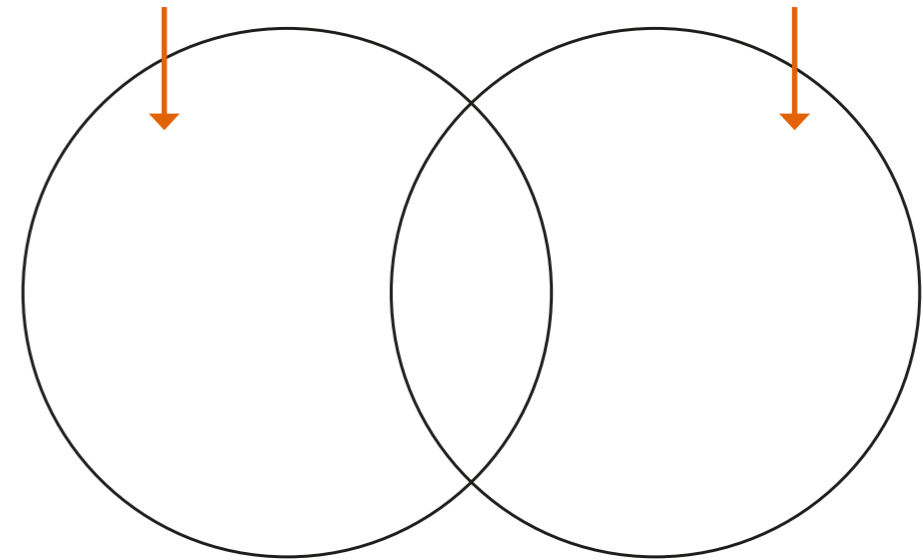


2 Write the numbers in the sorting diagram.

1 2 3 4 5 6 8 12 15 24

factors of 15

factors of 24



Complete the sentence.

The common factors of 15 and 24 are _____

3 Find the common factors of each pair of numbers.

a) 12 and 20

b) 16 and 25

c) 20 and 50

d) 20 and 60

4 a) Complete the table.

Factor pairs of 50	Factor pairs of 75	Factor pairs of 100
1 × 50	1 ×	
2 × 25		
5 × 10		

b) What are the common factors of 50, 75 and 100?

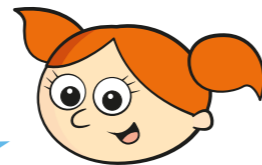
5 List 3 common factors of 360 and 180 that are greater than 50

6 Alex is making party bags.

She has 35 sweets and 25 balloons.

The sweets and balloons need to be shared equally, so that each bag has the same number of sweets and balloons.

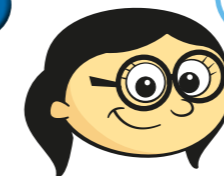
I can put 5 sweets and 5 balloons in each bag because 5 is a common factor of 35 and 25



Is Alex correct? _____

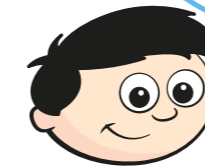
Explain your answer.

7



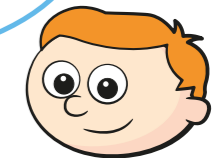
Annie

I am thinking of a 2-digit number.



Dexter

My number has a factor of 7 in common with Annie's number.



Ron

The common factors of my number and Annie's number are 1, 5 and 10

What number is Annie thinking of?

8 Whitney is trying to simplify these fractions.

$$\frac{18}{46}$$

$$\frac{24}{81}$$

$$\frac{40}{100}$$

I can use common factors to work out how to simplify these fractions.

$$\frac{121}{132}$$



Show how Whitney's method could work.

Talk about your answer with a partner.

