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?

_____

d) What are the common factors of 16 and 32?

_____

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 2 × 25 5 × 10	1 ×	

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

_____

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

_____

6 Alex is making party bags.

She has 35 sweets and 25 balloons.

All 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
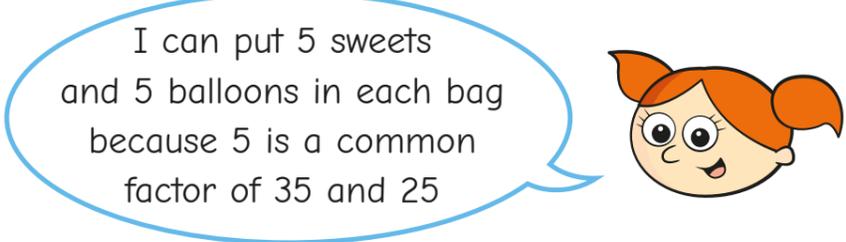
Is Alex correct? _____

Explain your answer.

_____

_____

7

> I am thinking of a 2-digit number.

Annie

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

Ron

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

Dexter
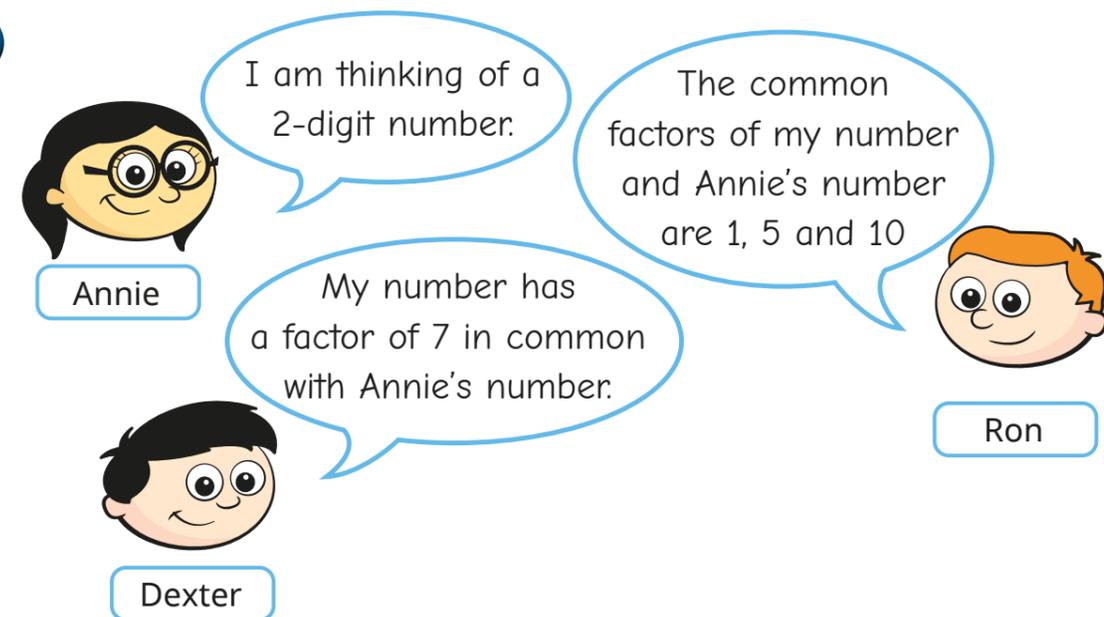
What number is Annie thinking of?

8 Whitney is finding equivalent fractions to these fractions.

$$\frac{18}{46} \qquad \frac{24}{81}$$

$$\frac{40}{100} \qquad \frac{121}{132}$$

> I can use common factors to find the equivalent fractions.

Show how Whitney's method could work.

Compare answers with a partner.