Y2 Morning Maths
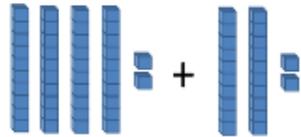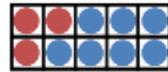
A. 42 + 22 =

B. 3 + 7 =

Use...

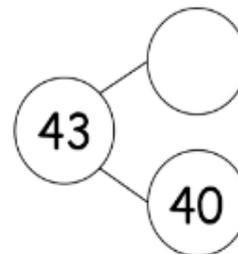C. 40 - ? = 20

Base 10

...to help you

6, 8, 10, 12, ☐
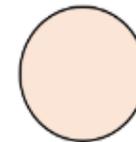
Use <, > or = to compare the candles.

What is the missing part?

43

40

What is the mathematical name for this shape?

Y6 Morning Maths

5) 294 + 70

1) How many cubes make up this shape?
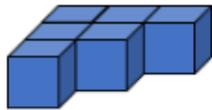
⬜ cubes

6) 4697 + 2534

2) How many grams are in $\frac{1}{2}$ a kilogram?

7) 3 x 8

3) What is 9 subtract 15?

8) 564 x 8

4) What fraction is shaded?

9) 80 x 5

10) 34 x 6
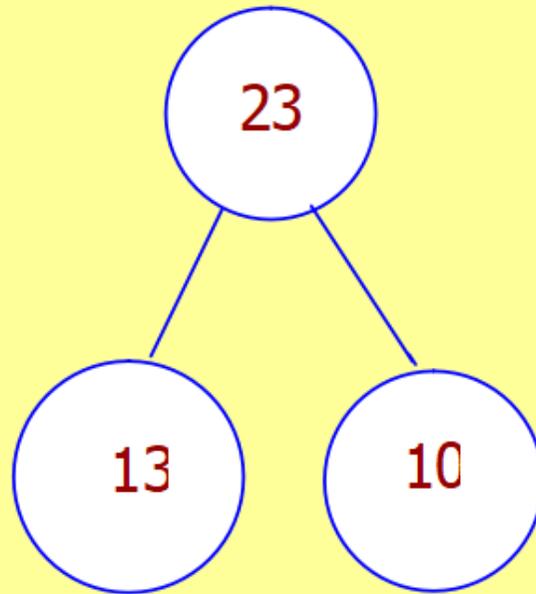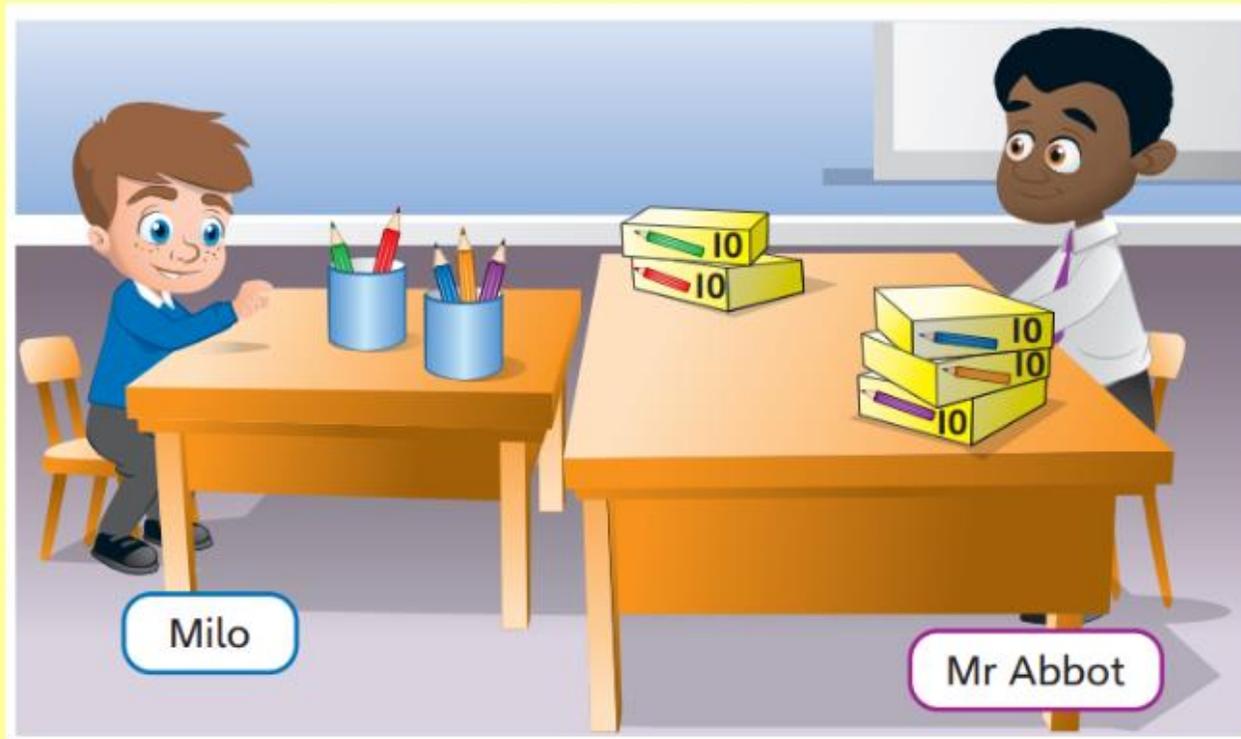
9.10.23
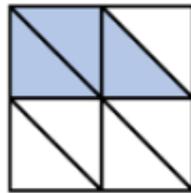
Starter

What is the fact-family for this part whole model?

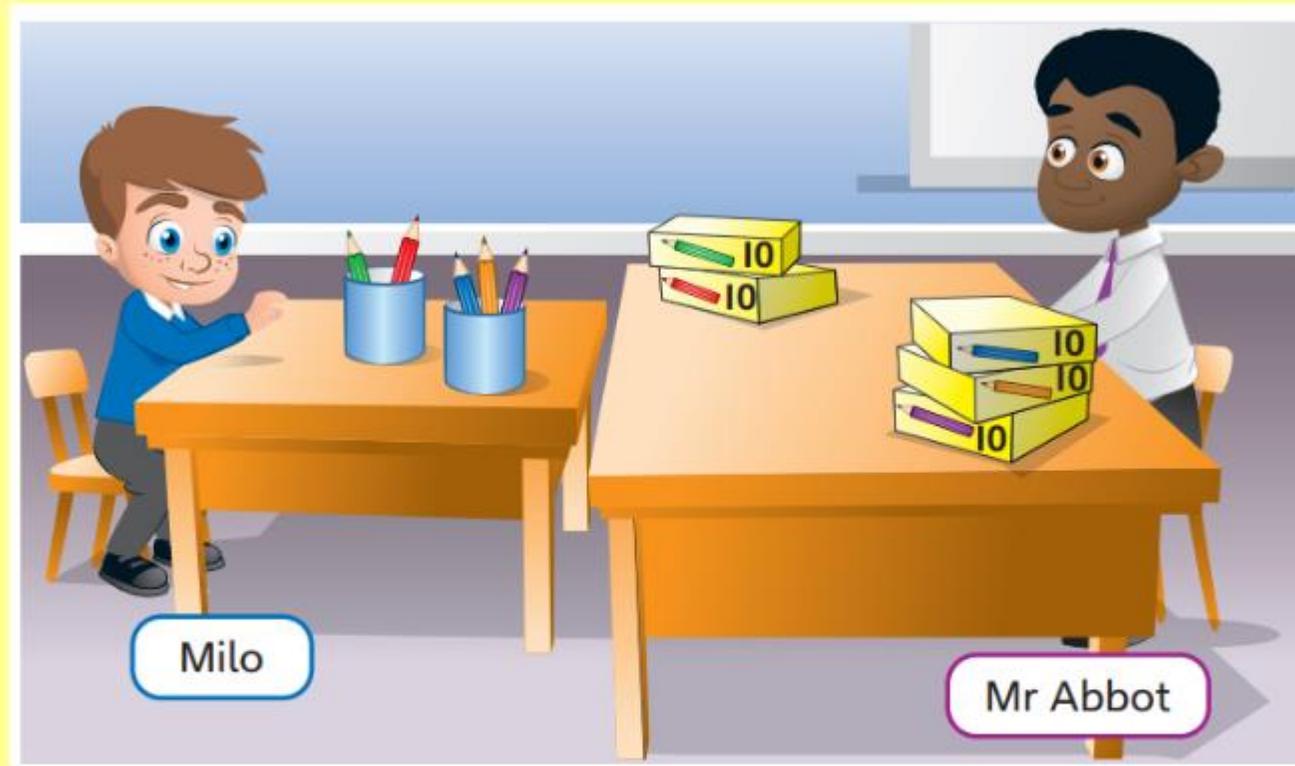Resources: Base ten equipment

Discover

a) How many pencils does Milo have?

b) How many pencils does Mr Abbot have?

Journalling

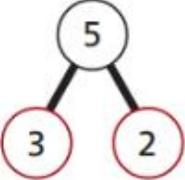Show the amounts using Base Ten. Draw it in your book.

What is the same? What is different?

Share

a)
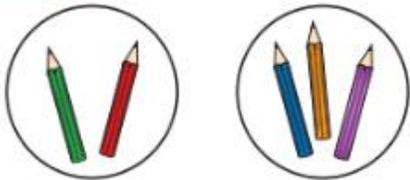
2 ones + 3 ones = 5 ones

$2 + 3 = 5$

Milo has 5 pencils.

I wrote $5 = 2 + 3$.

b)
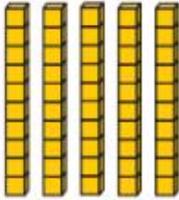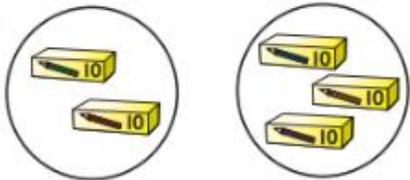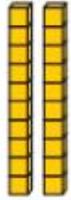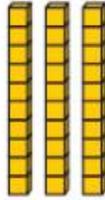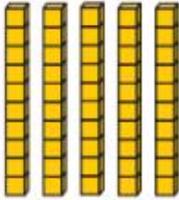
2 tens + 3 tens = 5 tens

$20 + 30 = 50$

Mr Abbot has 50 pencils.

a) Complete the following.

 + = ☐ pencils

 + = ☐ apples
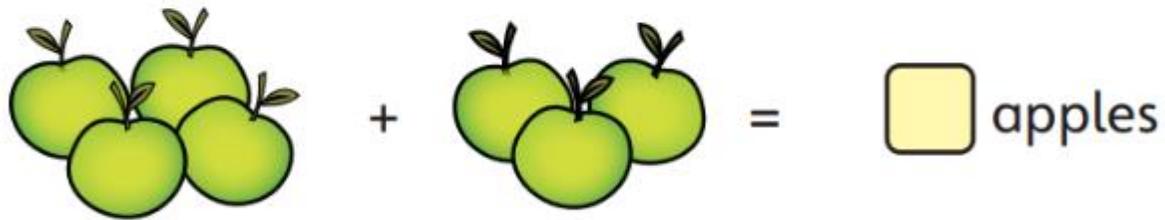
4 ones   +   3 ones   =   ☐ ones

4 tens   +   3 tens   =   ☐ tens

Complete the following.

$4 + 3 = \boxed{}$

$40 + 30 = \boxed{}$

Use the part-whole model to complete the number sentences.

$2 + 6 = \boxed{}$

$20 + 60 = \boxed{}$
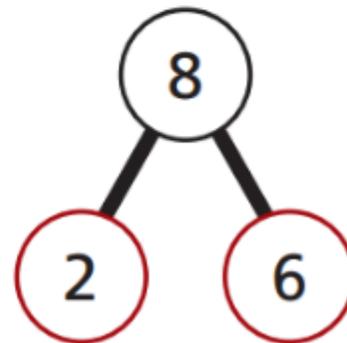
Your turn: Practise book Page 65

Add and subtract two multiples of 10

Textbook 2A p88

1 Complete the part-whole models and number sentences.

a)

9
/ \
2   7

$2 + \boxed{} = 9$

$\boxed{} = 9 - 2$

b)

90
/ \
20   ○
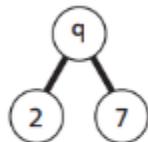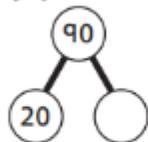
$20 + \boxed{} = 90$

$\boxed{} = 90 - 20$

2 Find the missing numbers.

a)

9	
2	7

○
/ \
20   70

b)

8
/ \
1   7

10	70
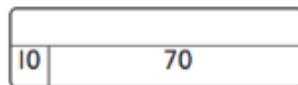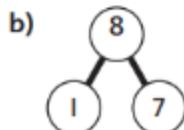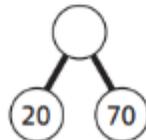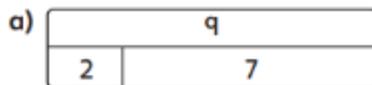
3 Use the diagrams to complete the number sentences.

a)

9	
3	6

$3 + 6 = \boxed{}$

$30 + 60 = \boxed{}$

$9 - 3 = \boxed{}$

$90 - 30 = \boxed{}$

b) ●●●●   ●●●●●

$\boxed{} = 4 + 5$

$50 + 40 = \boxed{}$

$90 - 50 = \boxed{}$

c)

○
/ \
40   10
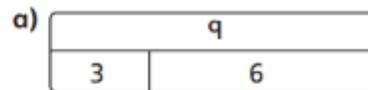
$40 + 10 = \boxed{}$

$50 - 40 = \boxed{}$

$50 - \boxed{} = 40$

Warm-up

Factors of 84

What do you see?
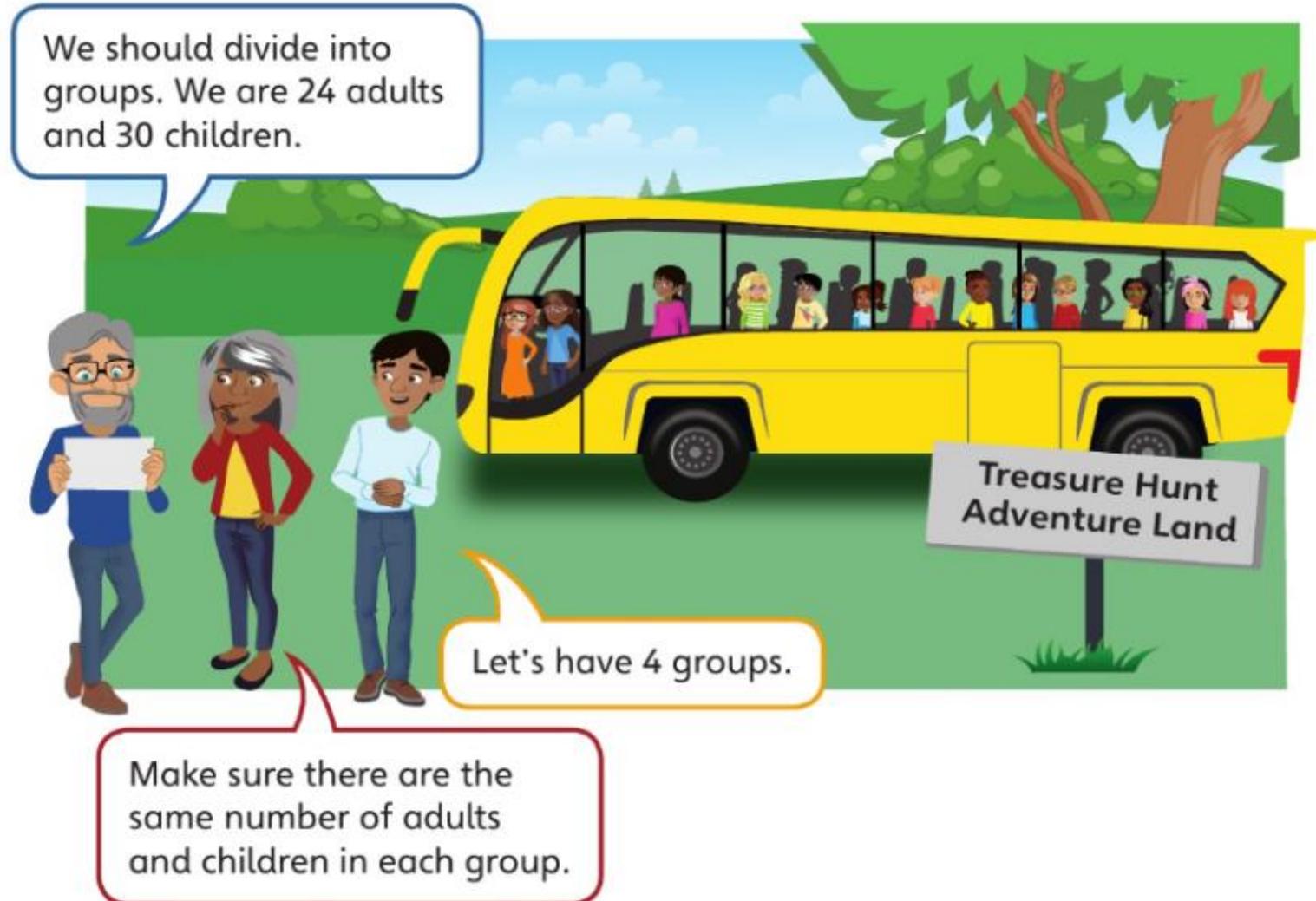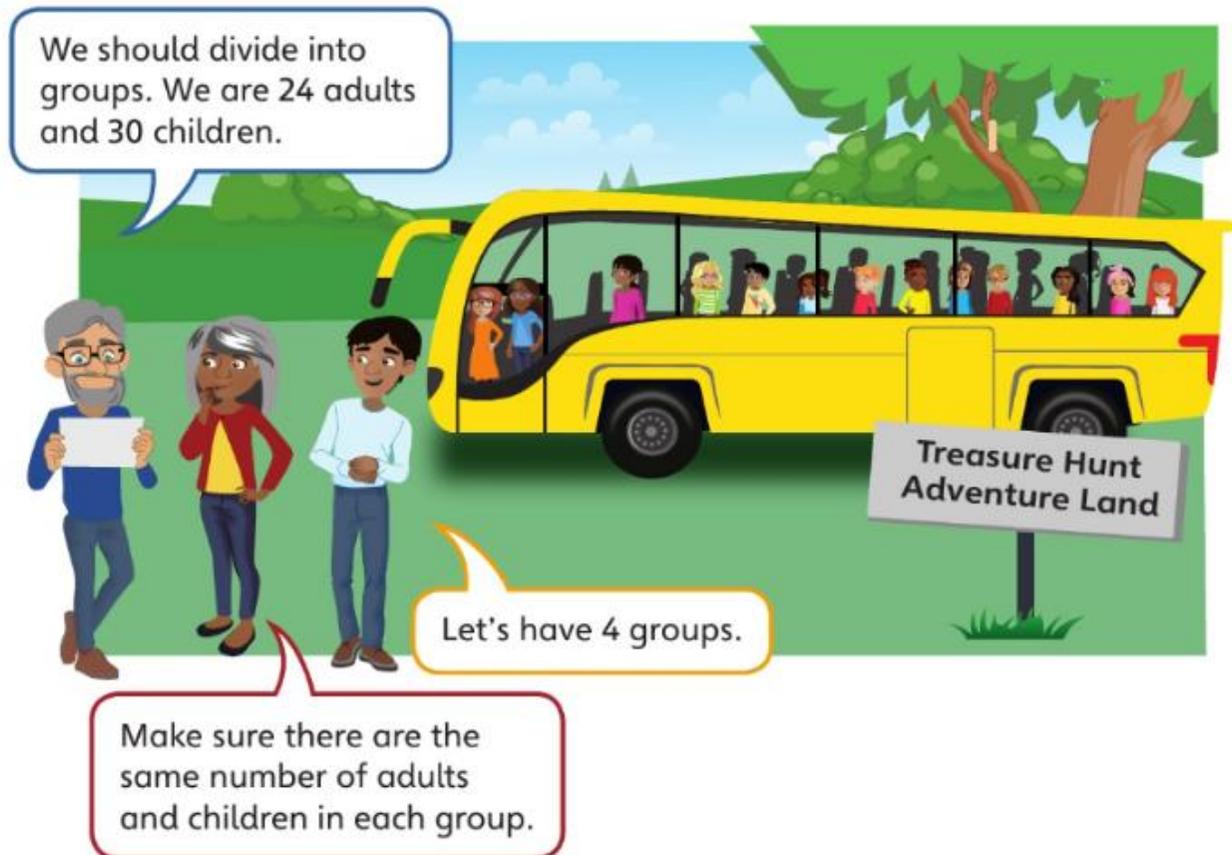
○ Show the adults can be split into 4 groups but the children cannot

○ How could the adult and children be split into equal groups?

Journaling

Share

a) The adults can divide equally into 4 groups, because 4 is a **factor** of 24.

The children cannot divide equally into 4 groups, because 4 is **not** a factor of 30.

The adults and children cannot split equally into 4 groups.

> A factor is a number that divides a number exactly.
>
> 4 is a factor of 24, because $24 \div 4 = 6$ with no remainder.

Adults
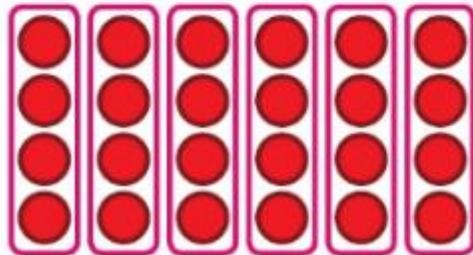
Children
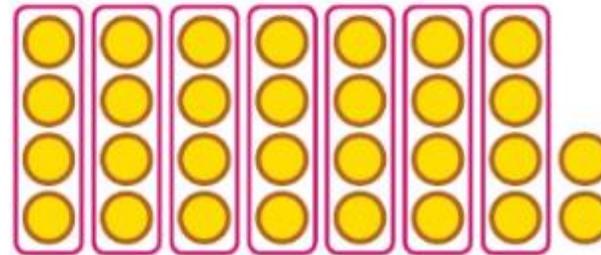
$24 \div 4 = 6$

$30 \div 4 = 7$ remainder 2

b) Find the factors of both 24 and 30.

$$1 \times 24 = 24 \qquad 1 \times 30 = 30$$
$$2 \times 12 = 24 \qquad 2 \times 15 = 30$$
$$3 \times 8 = 24 \qquad 3 \times 10 = 30$$
$$4 \times 6 = 24 \qquad 5 \times 6 = 30$$

Factors of 24 are 1, 2, 3, 4, 6, 8, 12 and 24.

Factors of 30 are 1, 2, 3, 5, 6, 10, 15 and 30.

I can use multiplication facts to find the factors of a number. Then I will find the factors that are in both lists.

1, 2, 3 and 6 are called common factors of 24 and 30. They are in **both** lists.

The adults and children could split into 1, 2, 3 or 6 equal groups.

Think together

1 Complete the factor pairs of 12 and 15.

$1 \times 12 = 12$

$\boxed{} \times \boxed{} = 12$

$\boxed{} \times \boxed{} = 12$

Factors of 12 are

_____ .

$1 \times \boxed{} = 15$

$\boxed{} \times \boxed{} = 15$

Factors of 15 are

_____ .

The common factors of 12 and 15 are $\boxed{}$ and $\boxed{}$.

Your turn

Write the numbers 1–12 in sorting circles like this.

Factors of 12   Factors of 10
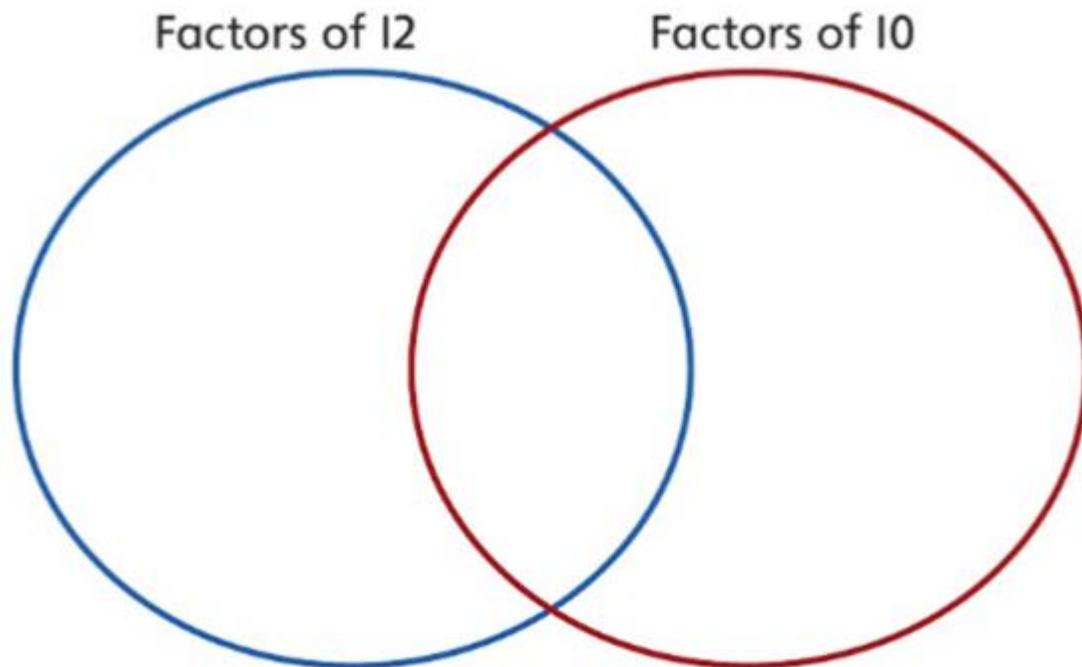
In the sorting circles, where are the common factors of 10 and 12?

3 Bella wants to find the common factors of the three numbers 10, 15 and 20.

She uses this table to help.

Factors of 10	Factors of 15	Factors of 20

I wonder how Bella will know when she has checked all the numbers she needs to.

a) Which numbers will appear in all three lists?

b) Which numbers will appear in just two lists?

c) Are there any numbers that will appear in just one list?

I know 2 will not be a factor of 15 because 15 is an odd number. I think that will help.

Common factors

1 a) Use these arrays to find all the factors of 14 and 18.
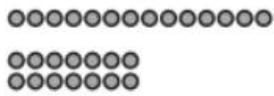
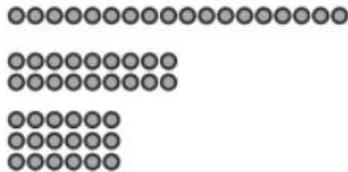○○○○○○○○○○○○○○   ☐ × ☐ = 14

○○○○○○○
○○○○○○○   ☐ × ☐ = 14

The factors of 14 are ☐ . ☐ . ☐ and ☐ .

○○○○○○○○○○○○○○○○○○   ☐ × ☐ = 18

○○○○○○○○○
○○○○○○○○○   ☐ × ☐ = 18

○○○○○○
○○○○○○
○○○○○○   ☐ × ☐ = 18

The factors of 18 are ☐ . ☐ . ☐ . ☐ . ☐ and ☐ .

b) List the common factors of 14 and 18.

_____

2 a) Show that 5 is a factor of 30.

_____

_____

b) Show that 8 is not a factor of 30.

_____

_____

3 Complete these lists, then find the common factors of 40 and 100.

1 × ☐ = 40   1 × ☐ = 100

☐ × ☐ = 40   _____

☐ × ☐ = 40   _____

☐ × ☐ = 40   _____

☐ × ☐ = 40   _____

The common factors of 40 and 100 are _____ .

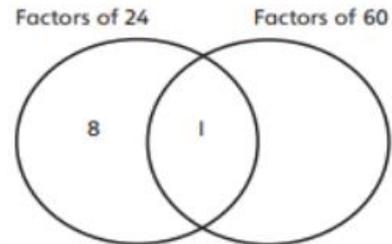**4** a) Write down the factors of 20. _____

b) Write down the factors of 45. _____

c) Write down the common factors of 20 and 45.

_____

5 Complete the sorting circles.

Then write down the common factors of 24 and 60.

_____

Factors of 24   Factors of 60

8   1

6 **a)** Complete the table to show all the factors of 35, 50 and 70. CHALLENGE

Factors of 35	Factors of 50	Factors of 70

Circle the common factors of all three numbers.

b) Lexi thinks of three numbers that have the common factors 1, 2, 3, 4 and 5. What could Lexi's three numbers be?

_____

Reflect

Find all the common factors of 15 and 60.

Do you need to check all the numbers up to 60?

_____
_____
_____
_____