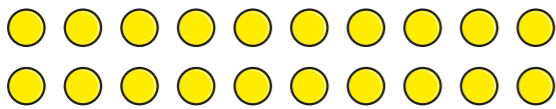
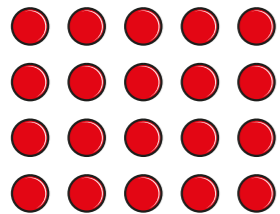


Identify factors of numbers and expressions

1 Use the arrays of 20 counters to find all the factors of 20



Factors of 20: 1, 2, 4, 5, 10, 20

2 a) Draw an array to show that 6 is a factor of 18



b) Draw an array to show that 4 is not a factor of 15



Did you draw the same arrays as a partner?

3 Use a word from the list to complete the sentences.

- factor half triple multiple

a) 8 is a multiple of 4

b) 3 is a factor of 9

c) 10 is a factor (multiple) of 10

4 Write a number in each empty box of the two-way table.

e.g.	Multiple of 4	Not a multiple of 4
Factor of 60	20	15
Not a factor of 60	8	7

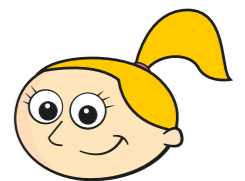
Are there any boxes that could have more than one number?

5 Mo has found the factors of a number.



Mo

Some of the factors of my number are 2, 3, and 8



Eva

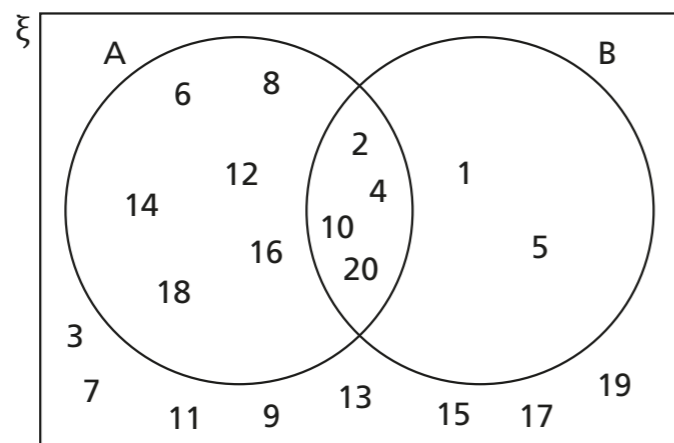
Mo's number must be 48, as $2 \times 3 \times 8 = 48$

Is Eva correct? No

How do you know?

e.g. 2, 3 and 8 are all factors of 24

- 6 The numbers 1 to 20 are placed on the Venn diagram.



What could each circle in the diagram represent?

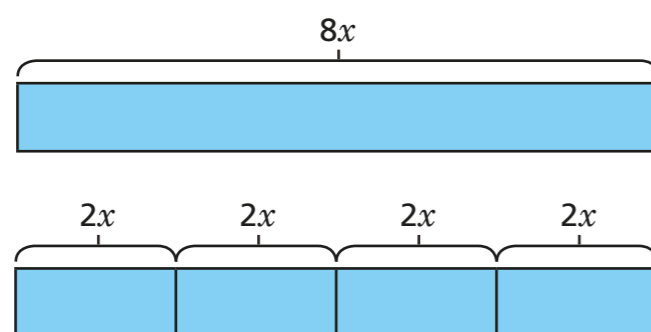
A could represent the multiples of 2

B could represent the factors of 20

- 7 Jack uses a bar model to represent $8x$.



I can see that 4 lots of $2x$ is the same as $8x$. Both 4 and $2x$ are factors of $8x$.



Find two more factors of $8x$. You could use bar models to help.

e.g. x and 8

- 8 Find all the factors of the expressions.

a) $24h$

1, $24h$, 2, $12h$, 3, $8h$, 4, $6h$, 6, $4h$, 8, $3h$, 12, $2h$, 24 , h

b) $6ab$

1, $6ab$, 2, $3ab$, 3, $2ab$, 6, ab , a , $6b$, $2a$, $3b$, $3a$, $2b$, $6a$, b

- 9 Show that 2 and $6y + 3$ are factors of $12y + 6$

e.g. $12y + 6 = 2 \times (6y + 3) = 12y + 6$

List two other factors of $12y + 6$

e.g. 3 and $4y + 2$

- 10 List two factors of each expression.

a) $3c + 6$

e.g. 3 and $c + 2$

b) $8d - 4$

e.g. 4 and $2d - 1$

c) $3xy - 3y$

e.g. $3y$ and $3x - 1$

d) $8x + 3y$

e.g. 1 and $8x + 3y$

