Understand and use factors
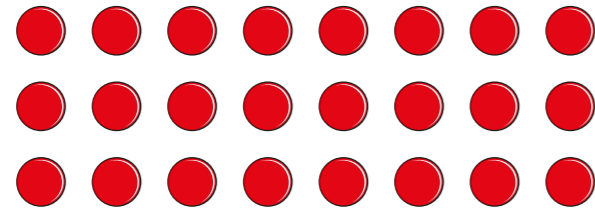
1 The array shows that 3 and 8 are factors of 24

a) Use counters to find other factors of 24

List your answers.

_____

b) Use counters to explain why 5 is not a factor of 24

Discuss your findings with a partner.

2 a) Draw all of the arrays that you can make using 16 counters.

b) Use your arrays to list all the factors of 16

_____

3 a) Draw all of the arrays that you can make using 7 counters.

b) What does your answer to part a) tell you about the number 7?

_____

4 Complete the factor pairs for 20

[   ] and 20   2 and [   ]   4 and [   ]

Are there any more? How do you know?

5 Find all the factors of these numbers.

a) 25

_____

b) 18

_____

c) 30

_____

6
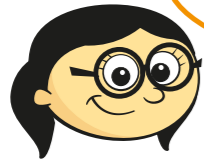
4.5 × 2 = 9, so 4.5 must be a factor of 9

Is Annie correct? _____

Explain your reasoning.

7 Filip is finding the factors of 60

He finds the following factors by halving and doubling the numbers in the previous factor pair.
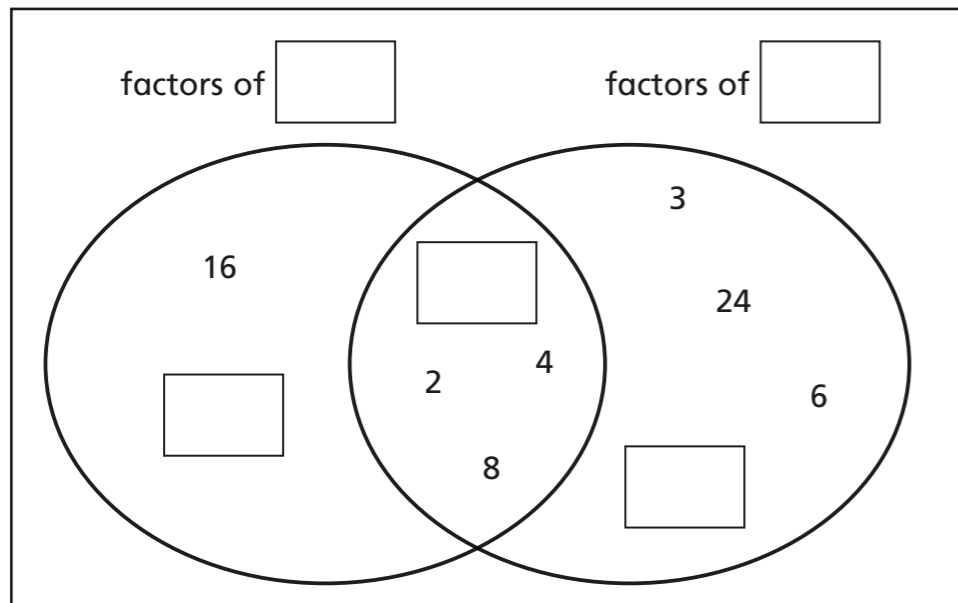
| 60 and 1 | 30 and 2 | 15 and 4 |

Filip thinks he has found all the factors of 60 because he can't halve 15

Do you agree with Filip? _____

Explain why.

8 **a)** Complete the Venn diagram.

factors of [ ]   factors of [ ]

16

3

[ ]

24

2   4

6

8

b) What are the common factors shown in the Venn diagram?

_____

c) What is the highest common factor shown in the Venn diagram? [ ]

9 Find the common factors of these pairs of numbers.

State the highest common factor.

a) 15 and 35

The common factors of 15 and 35 are _____

The highest common factor is [ ]

b) 100 and 40

The common factors of 100 and 40 are _____

The highest common factor is [ ]

c) 48 and 32

The common factors of 48 and 32 are _____

The highest common factor is [ ]

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