

Maths- Skills

This lesson will be live on teams for
your class at;

9am-5L

10am-5H

11am-5M

Learning objective; To revisit factors and identify
common factors.

Warm up

- What numbers have been highlighted here?
- What is special about them?

	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Warm up

	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

They are prime numbers

They can only be divided by 1 and themselves.

They only have 2 factors.

In your books complete the sentence;
Prime number are

Factors

A **factor** is a number that divides into another number exactly and without leaving a remainder.

Factors come in pairs, they are 2 numbers which multiply to make a product.

Complete these factor pairs for the number **12**

1 x ___ ___ x 6 ___ x ___

Mr Moody said- "Because factors come in pairs, all numbers have an even number of factors."

Lets see if he is correct

Can you find the factor pairs for these numbers; then list the individual factors (you do not need to repeat any number) then say if the number of factors are odd or even.

e.g. $42 = 1 \times 42 \quad 2 \times 21 \quad 6 \times 7 \quad = 1, 2, 6, 7, 21, 42 = \text{even}$

12 24 21 36 10 25

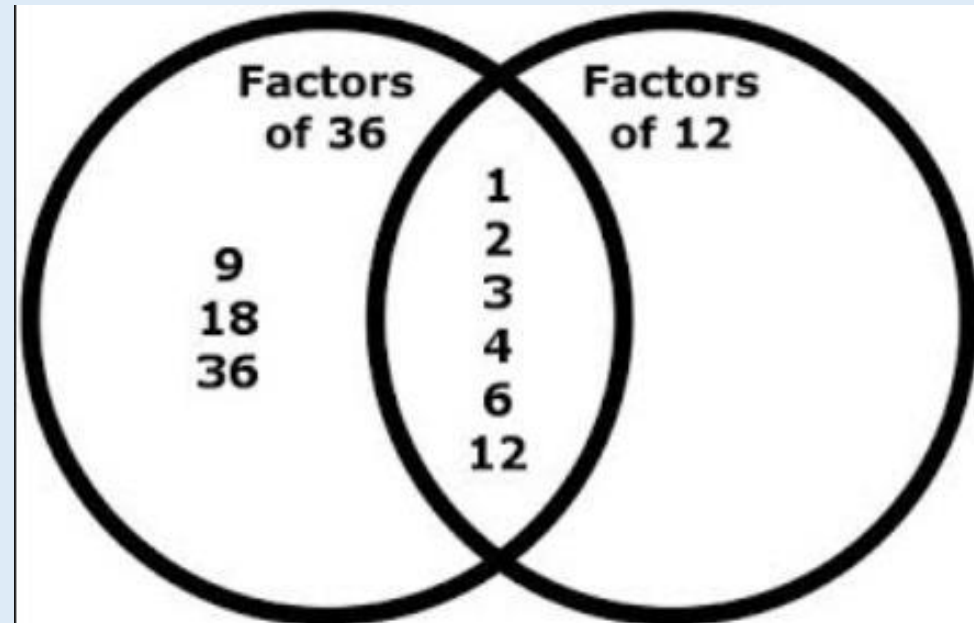
What have you found out?

Common factors

A common factor is a factor of 2 or more chosen numbers.

It means that the factor can be divided into both numbers without leaving a remainder.

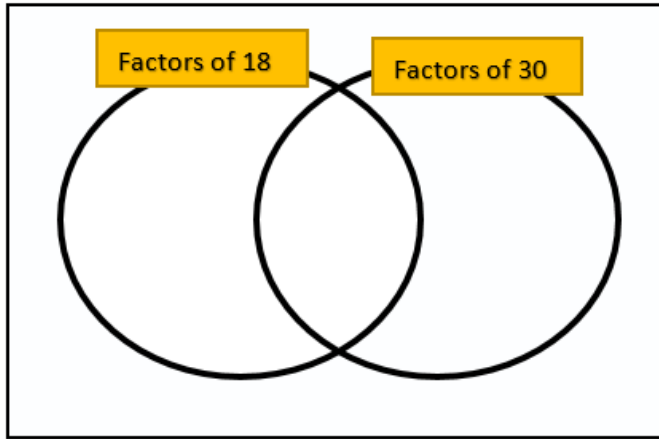
Look at this venn diagram, how can I identify the common factors?



Common factors

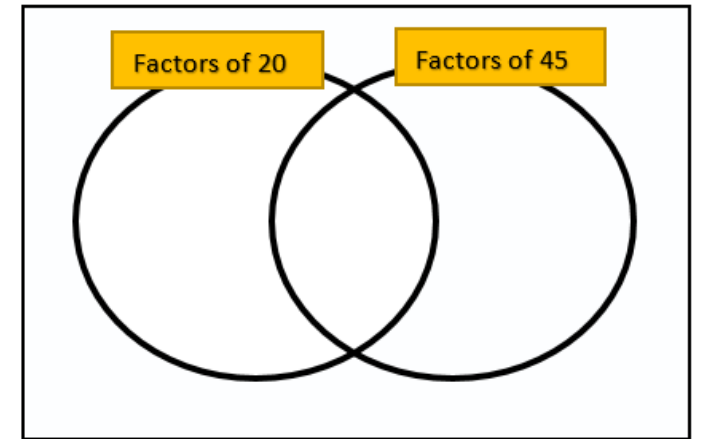
Fluency

Copy this venn diagram into your book, then insert the numbers into the correct position.



Place the following numbers correctly in the diagram above.

5	1	12	9	6	18
3	10	20	2	36	15



Place the following numbers correctly in the diagram above.

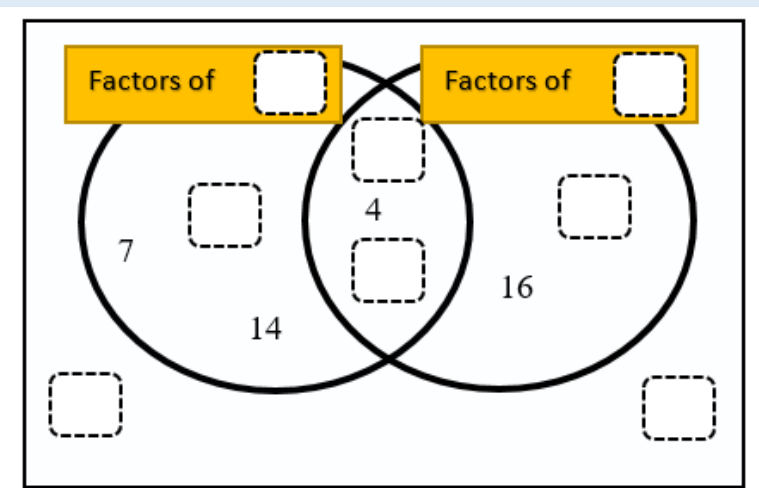
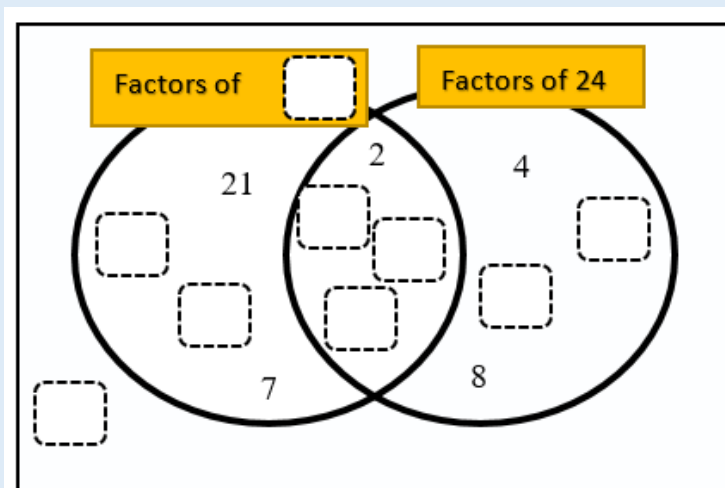
15	5	3	10	30	1
12	4	9	2	45	20

Reasoning

Copy this venn diagram into your book.

You need to work out the missing numbers based on what you know.

e.g. if they both have a factor of 2, they must be even.



Sorting Factors

In many assessments we will be asked to sort factors.

Can you tell me about each box and which numbers will go in each?

	Factor of 10	Not a Factor of 10
Factor of 18	A	B
Not a Factor of 18	C	D

2
5
4
6

Sorting Factors - Copy and complete these factor tables.

	Factor of 40	Not a Factor of 40
Factor of 12		
Not a Factor of 12		

- 12
- 8
- 4
- 7

	Factor of 50	Not a Factor of 50
Factor of 30		
Not a Factor of 30		

- 10
- 12
- 6
- 25

	Factor of 24	Not a Factor of 24
Factor of 44		
Not a Factor of 44		

- 11
- 9
- 8
- 4

Extension;
Can you add a
number into
each box?

Plenary- Lets make some generalizations

1. Most numbers have an equal number of factors apart from because.....
2. 2, 5, 7 and 11 are examples of..... because.....
3. Even numbers will always have the factor because.....
4. Every single number has the factor of and apart from the number
.....