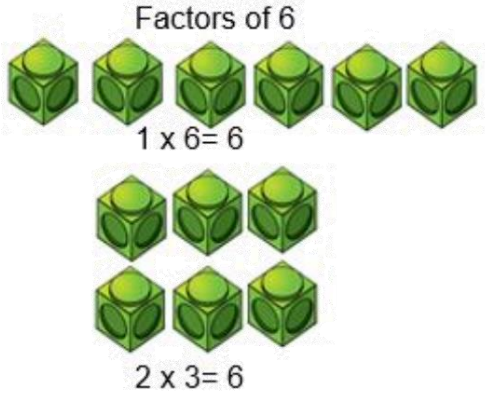
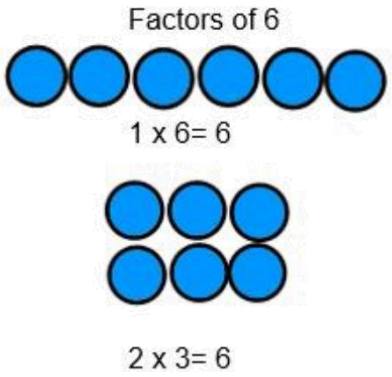
Y6 KIRF: I can identify common factors of a pair of numbers.

What can this look like?

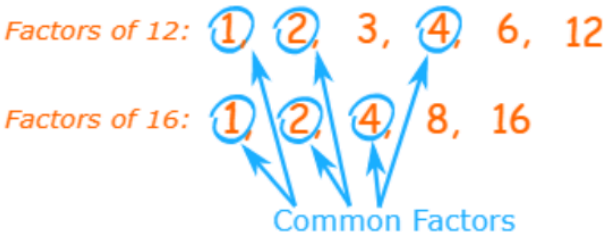
Concrete



Pictorial



Abstract



Questions to ask at home

What are the common factors of 18 and 21?
Is 12 a common factor of 48 and 36?
What is the highest common factor of 12 and 24?

Key vocabulary

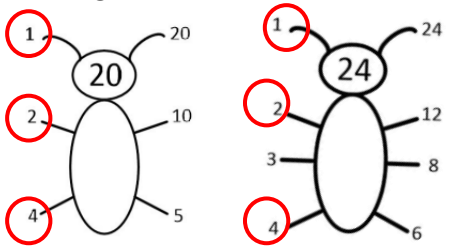
Factor – A number that divides from a given number without a remainder
e.g., factors of 12 include 6 and 2 because 12 ÷ 2 = 6 or 6 x 2 = 12

Multiple – A number that forms part of a specific group of multiplication
e.g., multiples of 5 include 15, 20 and 25

Common factor – A number that divides into two different given numbers without a remainder
e.g., A common factor of 18 and 12 is 6 as they both divide by 6

Things to try

Factor bugs – Each leg (or tail) is a factor of the bug's number.



The common factors of 20 and 24 are 1, 2, 4

Websites:

- https://www.topmarks.co.uk/maths-games/multiples-and-factors
- https://www.mathnook.com/math/math-speed-racing-factors.html
- https://www.math-play.com/Factors-Millionaire/factors-millionaire-game_html5.html
- https://vimeo.com/731425668

Y6 KIRF: I can identify prime numbers up to 100.

Key information

91	92	93	94	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

Prime Numbers – Numbers that are only divisible by 1 and themselves (e.g. 3 x 1 = 3)

Square Numbers – The answer to a number multiplied by itself (e.g. 6 x 6 = 36)

- Find out if a number is prime is by trying and divide that number by all the numbers that are smaller. If it can only be divided by 1 and itself then it is a prime number.
- 1 and 0 aren't prime numbers because you cannot divide 0 by anything and 1 can only be divided by itself.
- 2 is the only even prime number.
- Not counting 2 and 5, all prime numbers end in 1, 3, 7, 9. But, not all numbers ending in 1, 3, 7 or 9 are prime numbers.
- Prime numbers go on forever. They are infinite.

Key vocabulary

Prime - Prime numbers are numbers greater than 1 that only have two factors, 1 and the number itself. This means that a prime number is only divisible by 1 and itself.

Integers – whole numbers

Composite – whole numbers which are not prime. Numbers that have more than 2 factors (but finite number of factors) are known as composite numbers.

Our knowledge of factors is essential to learning prime numbers

For example…

7 1 7	6 1 2 3 6	1 1
7 is a prime number. 7 has only two factors, 1 and 7.	6 is NOT a prime number. 6 has four factors (1, 2, 3, and 6). 6 is a composite number.	1 is neither prime nor composite. 1 has only one factor, which is 1 itself.

Things to try

Regular interaction with facts helps to move them from our short to long-term memory, therefore little and often is the best approach for revision.

Choosing a random 2-digit number and checking if it is prime or composite will not take long, but is excellent practise.

This KIRF is much easier once times tables are secured. Having Ultimate Recall will mean that square numbers are cracked and primes can easily be checked.

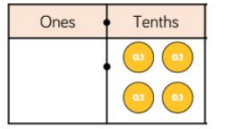
Websites:

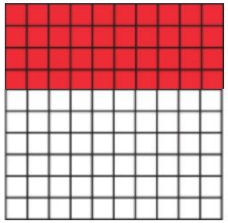
- Hit the Button (https://www.topmarks.co.uk/maths-games/hit-the-button)
- Prime Number Ninja Game (Number Ninja - Prime Numbers • ABCya!)

Y6 KIRF: I can convert between decimals, fractions and percentages.

What can this look like?

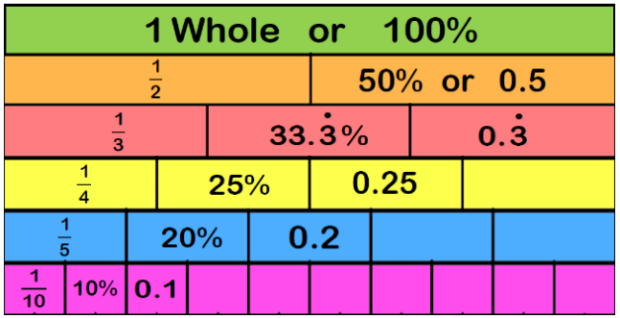
Concrete



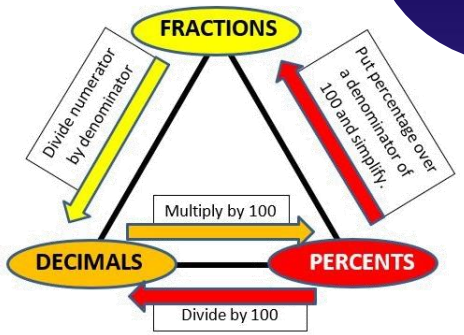


$0.4 = \frac{4}{10} = 40\%$

Pictorial



Abstract



0.5	50%
0.25	25%
0.1	10%
0.01	1%
0.2	20%
0.75	75%

Questions to ask at home

What is 15% as a fraction and decimal?
Which is closer to 100%, 45 or 0.5? How do you know?
Complete the sentence - to convert a decimal to a percentage you …

Key vocabulary

Convert – To change the expression without changing the size or amount

Decimal number – A decimal is a way of writing a number that is not whole, and are used to represent a whole number plus a fraction of a whole number
e.g., 4.2 means 4 and 2 tenths.
4.20 means 4 and 2 tenths and 0 one-hundredths. The last zero does not need to be there.
4.02 means 4 and 0 tenths and 2 one-hundredths.

Fraction – A fraction represents the equal parts of the whole

Per cent – Parts per 100. It shows the ratio 'out of 100'

Things to try

- Dominos - write the fraction, decimal and percentage the domino is showing
- Pairs game- make your own fraction, decimal, percentage card matching game
- FDP Poster - create a poster which explains how to convert between fractions, decimals and percentages
- Let's go shopping - look out for percentages when out shopping. What is 25% as a decimal?

Websites:

- https://www.mathplayground.com/percent04.html
- https://mathsframe.co.uk/en/resources/resource/120/match_fractions_decimals_and_percentages#.UCdcd2MsCEY