The Four Operations in Year 5

Addition

```
  2 3.4 8 1
+   1 3 6 2
  2 4 8 4 3
      ₁
```

	£	2	3 .	5	9
+	£	7 .	5	5	
	£	3	1 .	1	4
		₁	₁	₁	

	1	9 .	0	1
		3 .	6	5
+		0 .	7	0
	2	3 .	3	6
		₁	₁	

Subtraction

Compact column method

```
 ²3̸ ¹0 8̸ ⁴1 ¹0 5̸ ⁵6
-      2  1  2  8
    2  8, 9  2  8
```

```
 ⁶7̸ ¹0 X̸ ⁶1 9̸ ⁸8 . ¹0
-         3  7  2 . 5
    6  7  9  6 . 5
```

Multiplication

Step 1 - short multiplication for multiplying by 1 digit

X	300	20	7
4	1200	80	28

➡

```
H T U
  3 2 7
×     4
1 3 0 8
  ₁ ₂
```

Step 2 - long multiplication for multiplying by 2-digits

X	10	8
10	100	80
3	30	24

➡

```
H T U
  1 8
× 1 3
  2 4   (8 x 3)
  3 0   (10 x 3)
  8 0   (8 x10)
1 0 0   (10 x10)
2 3 4
```

➡

```
H T U
  1 8
× 1 3
  5 4   (18 x 3)
    ₂
1 8 0   (18 x 10)
2 3 4
```

Step 3 - moving towards more complex numbers

```
  3 6 5 2
×       8
2 9, 2 1 6
  ₅ ₄ ₁
```

```
    1 2 3 4
×       1 6
  7 4 0 4   (1234 x 6)
    ₂ ₃ ₂
1 2 3 4 0   (1234 x 10)
1 9, 7 4 4
```

Division

Short division

```
  3 2
3)9 ⁶6
```

```
   1 8
4)7 ³2
```

```
  2 1 8
4)8 7 ³2
```

```
    6 6 3 r 5
8)5 ⁵3 ⁵0 ²9
```

Estimate
Calculate
Check it!

Year 5 Key Maths Vocabulary

Square Number: It is a number which can be represented in the shape of a square. A number that results from multiplying an integer by itself. It is also called perfect square. EXAMPLES: 4, 9, 16, 25, 36.

Prime Number:

A number that has exactly two factors. A number that can only be divided evenly by itself and one.

EXAMPLES: 2, 3, 5, 7, 11, 13, 17, 19.

Composite Numbers: A number with more than two factors.

$$16 = 1 \times 16 \qquad 16 \div 1 = 16$$
$$16 = 2 \times 8 \qquad 16 \div 2 = 8$$
$$16 = 4 \times 4 \qquad 16 \div 4 = 4$$

16 is a composite number.
The factors of 16 are 1, 16, 2, 8, 4.

Cubed number: a number raised to the third power which is indicated by a small 3 to its upper-right.
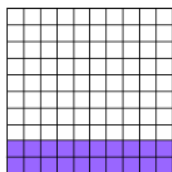
$$5 \times 5 \times 5 = 125$$
$$\text{so } 5^3 = 125$$

Prime Factor:

A prime factor is a prime number that divides exactly into another given number.

$$20 = 2 \times 2 \times 5$$

Remainder: The amount left over after dividing a number.

Remainders can be written as a whole number, decimal or a decimal fraction

$$239\tfrac{1}{4}$$
$$4\overline{)957}$$
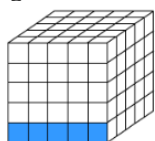
Proper Fractions: A fraction smaller than one whole.
The numerator is smaller than the denominator.

numerator $\dfrac{3}{5}$ denominator

Improper Fraction: A fraction equivalent to or larger than one whole. The numerator is larger than or equal to the denominator.

numerator $\dfrac{5}{2}$ denominator

Mixed Number A number written as a whole number with a fraction.
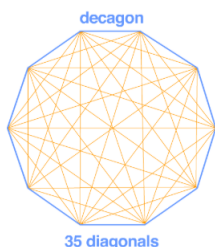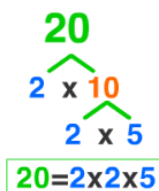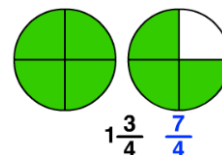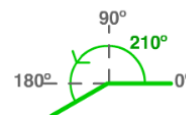
$$1\tfrac{3}{4} \qquad \tfrac{7}{4}$$

Percentage:

A percent or percentage is a fraction expressed as a number out of 100 followed by the % symbol.

$$\frac{20}{100} = 20\%$$

Volume

amount of space occupied by an object.

Capacity:

The amount a container or something can hold.

Reflex angle: any angle between 180º and 360º.
Acute: Any angle smaller than 90º
Obtuse: Any angle that is between 90º and 180º

between 180° and 360°

Diagonal

a line joining two non-adjacent vertices or corners of a polygon.

decagon

35 diagonals

Negative Numbers

any number less than zero. They are written with a minus sign.

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10

- 8.5   - 4.75   - 0.25   0.25   4.75   8.5

Powers of 10 the number of times a base number is multiplied by itself, indicated by a small number to its upper-right
e.g. 10^5 = 10 x 10 x 10 x 10 x 10, read as 10 to the power of 5.
• the small number is called a power, an exponent, an index or order.

Quadrant: A quarter of a circle or its circumference or any quarter of a plane divided by an x and y axis.

Parallel: Equidistant, that is, the same distance apart, never touching.

Perpendicular:

When two lines meet at right angles to the horizon or another object.

perpendicular lines