



# YEAR 6 – Autumn Term Knowledge Organiser



Topics Covered: Multiplication and division, one-step equations, factors, prime numbers, multiples, square numbers, cube numbers, average, interpreting timetables, interpreting pie charts, perimeter, draw and measure angles using a protractor, ordering and calculating fractions, converting units of time, analogue and digital time

## SQUARE NUMBERS UP TO $12 \times 12$



$1 \times 1$  or  $1^2 = 1$   
 $2 \times 2$  or  $2^2 = 4$   
 $3 \times 3$  or  $3^2 = 9$   
 $4 \times 4$  or  $4^2 = 16$   
 $5 \times 5$  or  $5^2 = 25$   
 $6 \times 6$  or  $6^2 = 36$   
 $7 \times 7$  or  $7^2 = 49$   
 $8 \times 8$  or  $8^2 = 64$   
 $9 \times 9$  or  $9^2 = 81$   
 $10 \times 10$  or  $10^2 = 100$   
 $11 \times 11$  or  $11^2 = 121$   
 $12 \times 12$  or  $12^2 = 144$



## CUBE NUMBERS UP TO $10 \times 10 \times 10$

$1 \times 1 \times 1$  or  $1^3 = 1$   
 $2 \times 2 \times 2$  or  $2^3 = 8$   
 $3 \times 3 \times 3$  or  $3^3 = 27$   
 $4 \times 4 \times 4$  or  $4^3 = 64$   
 $5 \times 5 \times 5$  or  $5^3 = 125$   
 $6 \times 6 \times 6$  or  $6^3 = 216$   
 $7 \times 7 \times 7$  or  $7^3 = 343$   
 $8 \times 8 \times 8$  or  $8^3 = 512$   
 $9 \times 9 \times 9$  or  $9^3 = 729$   
 $10 \times 10 \times 10$  or  $10^3 = 1,000$

## Key Vocabulary:

**Partitioning** – Splitting a number into parts. E.g. 15 can be split into 10 and 5.

**Rounding** – Making a number simpler but keeping its value close to what it was. E.g. 73 rounded to 10 = 70.

**Mixed Number** – A mixed number is a whole number and a proper fraction combined.

## Prime Number

2	3	5	7	11
13	17	19	23	29
31	37	41	43	47
53	59	61	67	71
73	79	83	89	97

## Key Vocabulary:

**Prime Numbers** – A number that only has two factors - one and itself e.g. 7.

**Square Numbers** – The result when a number is multiplied by itself. 25 is a square number because  $5 \times 5 = 25$ .

**Multiple** – The number you get when you multiply one number by another. The multiples of 5 are 5, 10, 15, 20 etc.

**Factors** – A number that divides exactly into another number without a remainder. All even numbers have 2 as a factor.

## Place Value

Place Value											
Millions			Thousands			Ones			Decimals		
Hundred Millions	Ten Millions	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
7	8	9	1	2	3	4	5	6	.7	8	9

