Year 6 Maths Knowledge Organiser

Term	Definition	Example
factor	a number that divides exactly into another number	factors of 12 = 1, 2, 3, 4, 6, 12
common factor	factors of two numbers that are the same	common factors of 8 and 12 = 1, 2, 4
prime number	a number with only 2 factors: 1 and itself	2, 3, 5, 7, 11, 13, 17, 19…
composite number	a number with more than two factors	12 (it has 6 factors)
prime factor	a factor that is prime	prime factors of 12 = 2, 3
multiple	a number in another number's times table	multiples of 9 = 9, 18, 27, 36…
common multiple	multiples of two numbers that are the same	common multiples of 4 and 6 = 12, 24…
square numbers	the result when a number has been multiplied by itself	25 (5^2 = 5x5) 49 (7^2 = 7x7)

Fractions, decimals & percentages

1/100	0.01	1%	÷ 100
1/20	0.05	5%	÷ 20
1/10	0.1	10%	÷ 10
1/5	0.2	20%	÷ 5
¼	0.25	25%	÷ 4

Angles

full turn 360°

half turn	180°
right angle	90°
acute angle	< 90°
obtuse angle	> 90°
reflex angle	>180°

Roman numerals

1	I	100	C
5	V	500	D
10	X	1000	M
50	L		

The mean

The mean is a type of average. To find the mean, add up all the numbers and divide by how many there are. E.g. the mean of 4, 5, 3, 4 is 4. (Because 4 + 5 + 3 + 4 = 16, and 16 ÷ 4 = 4)

2D shapes

Name	No. of sides
quadrilateral	4
pentagon	5
hexagon	6
heptagon	7
octagon	8
nonagon	9
decagon	10

polygon = shape with straight sides
regular = all sides/angles the same
irregular = sides/angles **not** same

Types of triangle

scalene equilateral isosceles

Types of quadrilateral

parallelogram trapezium rhombus

AREA
is the amount of space inside a 2D shape

usually measured in cm^2 or m^2.
Area of a triangle
= (base x height) ÷ 2
Area of a parallelogram
= base x height
(Height = perpendicular height)

Volume = the amount of space a 3D shape takes up, usually measured in cm^3 or m^3

Weight, Length and Capacity Place Mat

Length

1 centimeter (cm) = 10 millimeters (mm)
1 metre (m) = 100 centimeters (cm)
1 kilometer (km) = 1000 metres (m)

Weight

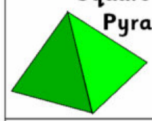
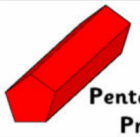
1 gram (g) = 1000milligrams (mg)
0.1 kilograms (kg) = 100 grams (g)
1 kilogram (kg) = 1000 grams (g)
1 ton = 1000 kilograms (kg)

Capacity

1 litre (l) = 1000 milliliters (ml)
1 liter (l) = 100 centiliters (cl)
1 centiliter (cl) = 10 milliliters (ml)
0.1 liters (l) = 100 milliliters (ml)

Imperial Units

1 pint = 568ml
1 inch = 2.5 cm or 25 mm
1 foot = 12 inches or 30 cm
1 mile = 1.6 km
1 ounce = 25g
1 pound (lb) = 500g

 Square-based Pyramid	5 faces 5 vertices 8 edges
 Sphere	1 faces 0 vertices 0 edges
 Octagonal Prism	10 faces 16 vertices 24 edges
 Pentagonal Prism	7 faces 10 vertices 15 edges

Co-ordinates

Read co-ordinates along the x axis (horizontal) first, then the y axis (vertical). E.g. (3,-4) = go right 3, down 4.