
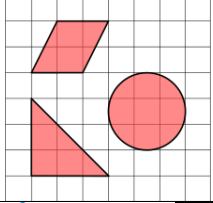

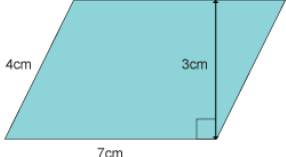
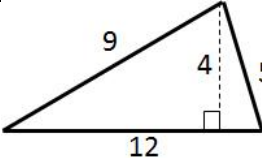
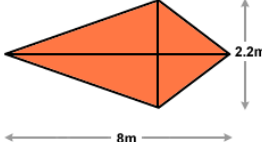
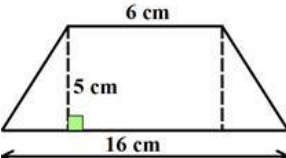
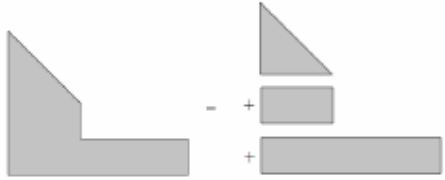
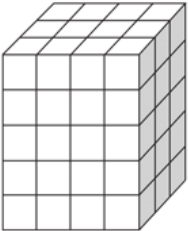
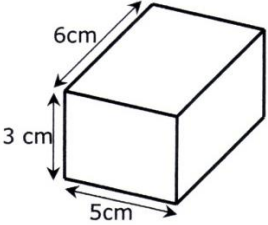
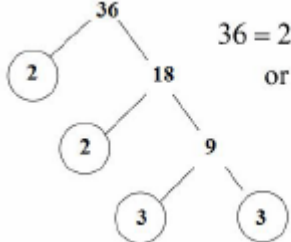


Year 8 Sets 3 and 4 Autumn Half Term 1

Topic/Skill	Definition/Tips	Example
1. Perimeter	The total distance around the outside of a shape. Units include: <i>mm, cm, m</i> etc.	 $P = 8 + 5 + 8 + 5 = 26cm$
2. Area	The amount of space inside a shape. Units include: mm^2, cm^2, m^2	
3. Area of a Rectangle	Length x Width	 $A = 36cm^2$
4. Area of a Parallelogram	Base x Perpendicular Height Not the slant height.	 $A = 21cm^2$
5. Area of a Triangle	Base x Height ÷ 2	 $A = 24cm^2$
6. Area of a Kite	Split in to two triangles and use the method above.	 $A = 8.8m^2$
7. Area of a Trapezium	$\frac{(a + b)}{2} \times h$ “Half the sum of the parallel side, times the height between them. That is how you calculate the area of a trapezium”	 $A = 55cm^2$
8. Compound Shape	A shape made up of a combination of other known shapes put together.	

9. Volume	Volume is a measure of the amount of space inside a solid shape. Units: mm^3, cm^3, m^3 etc.	
10. Volume of a Cube/Cuboid	$V = \text{Length} \times \text{Width} \times \text{Height}$ $V = L \times W \times H$ You can also use the Volume of a Prism formula for a cube/cuboid.	 $\text{volume} = 6 \times 5 \times 3$ $= 90 \text{ cm}^3$
11. Prime Factor	A factor which is a prime number.	The prime factors of 18 are: 2, 3
12. Product of Prime Factors	Finding out which prime numbers multiply together to make the original number. Use a prime factor tree . Also known as 'prime factorisation'.	 $36 = 2 \times 2 \times 3 \times 3$ or $2^2 \times 3^2$
13. Square Number	The number you get when you multiply a number by itself .	1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225... $9^2 = 9 \times 9 = 81$
14. Square Root	The number you multiply by itself to get another number. The reverse process of squaring a number.	$\sqrt{36} = 6$ because $6 \times 6 = 36$
15. Solutions to $x^2 = \dots$	Equations involving squares have two solutions , one positive and one negative .	Solve $x^2 = 25$ $x = 5 \text{ or } x = -5$ This can also be written as $x = \pm 5$
16. Cube Number	The number you get when you multiply a number by itself and itself again .	1, 8, 27, 64, 125... $2^3 = 2 \times 2 \times 2 = 8$
17. Cube Root	The number you multiply by itself and itself again to get another number. The reverse process of cubing a number.	$\sqrt[3]{125} = 5$ because $5 \times 5 \times 5 = 125$
18. Powers of...	The powers of a number are that number raised to various powers .	The powers of 3 are: $3^1 = 3$ $3^2 = 9$ $3^3 = 27$ $3^4 = 81 \text{ etc.}$

