
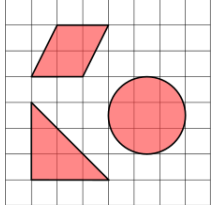

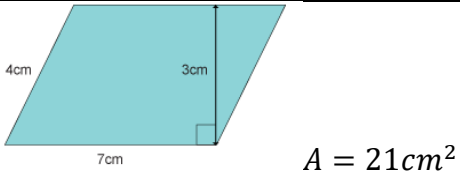
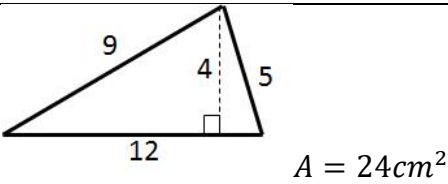
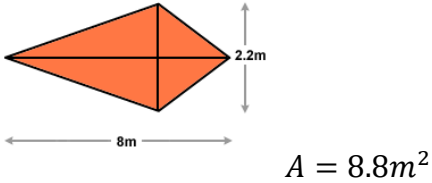
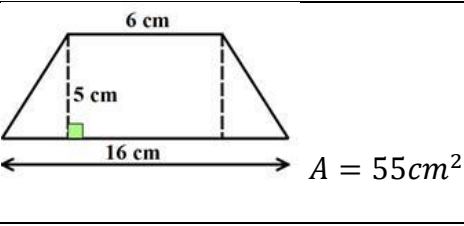
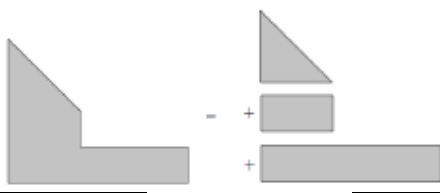
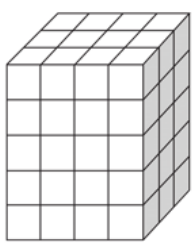
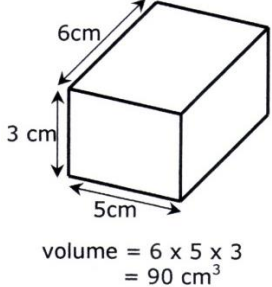
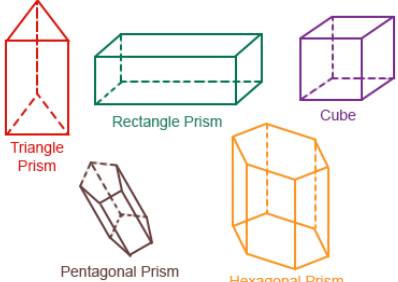
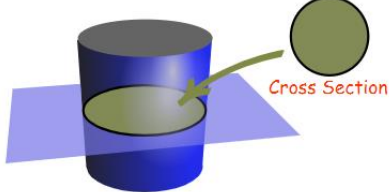


Year 7 Sets 1, 2 and 3 Spring Term 1

Topic/Skill	Definition/Tips	Example
1. Linear Sequence	A number pattern with a common difference .	2, 5, 8, 11... is a linear sequence
2. Term	Each value in a sequence is called a term.	In the sequence 2, 5, 8, 11..., 8 is the third term of the sequence.
3. Term-to-term rule	A rule which allows you to find the next term in a sequence if you know the previous term .	First term is 2. Term-to-term rule is 'add 3' Sequence is: 2, 5, 8, 11...
4. nth term	A rule which allows you to calculate the term that is in the nth position of the sequence. Also known as the 'position-to-term' rule. n refers to the position of a term in a sequence.	nth term is $3n - 1$ The 100 th term is $3 \times 100 - 1 = 299$
5. Finding the nth term of a linear sequence	1. Find the difference . 2. Multiply that by n . 3. Substitute $n = 1$ to find out what number you need to add or subtract to get the first number in the sequence .	Find the nth term of: 3, 7, 11, 15... 1. Difference is +4 2. Start with $4n$ 3. $4 \times 1 = 4$, so we need to subtract 1 to get 3. nth term = $4n - 1$
6. Fibonacci type sequences	A sequence where the next number is found by adding up the previous two terms	The Fibonacci sequence is: $1, 1, 2, 3, 5, 8, 13, 21, 34 \dots$ An example of a Fibonacci-type sequence is: $4, 7, 11, 18, 29 \dots$
7. Geometric Sequence	A sequence of numbers where each term is found by multiplying the previous one by a number called the common ratio, r .	An example of a geometric sequence is: $2, 10, 50, 250 \dots$ The common ratio is 5 Another example of a geometric sequence is: $81, -27, 9, -3, 1 \dots$ The common ratio is $-\frac{1}{3}$
8. Perimeter	The total distance around the outside of a shape. Units include: <i>mm, cm, m</i> etc.	8 cm  5 cm $P = 8 + 5 + 8 + 5 = 26cm$

9. Area	The amount of space inside a shape. Units include: mm^2 , cm^2 , m^2	
10. Area of a Rectangle	Length x Width	
11. Area of a Parallelogram	Base x Perpendicular Height Not the slant height.	
12. Area of a Triangle	Base x Height ÷ 2	
13. Area of a Kite	Split in to two triangles and use the method above.	
14. Area of a Trapezium	$\frac{(a + b)}{2} \times h$ <p>“Half the sum of the parallel side, times the height between them. That is how you calculate the area of a trapezium”</p>	
15. Compound Shape	A shape made up of a combination of other known shapes put together.	
16. Volume	Volume is a measure of the amount of space inside a solid shape. Units: mm^3 , cm^3 , m^3 etc.	

<p>17. Volume of a Cube/Cuboid</p>	<p>$V = \text{Length} \times \text{Width} \times \text{Height}$ $V = L \times W \times H$</p> <p>You can also use the Volume of a Prism formula for a cube/cuboid.</p>	
<p>18. Prism</p>	<p>A prism is a 3D shape whose cross section is the same throughout.</p>	
<p>19. Cross Section</p>	<p>The cross section is the shape that continues all the way through the prism.</p>	
<p>20. Volume of a Prism</p>	<p>$V = \text{Area of Cross Section} \times \text{Length}$ $V = A \times L$</p>	