	Topic	Information	Examples	Sparx Clip
1	Term-to-term rules	The **term-to-term rule** for a sequence tells us how we get from one term to the next.	<table><tr><td>First Term</td><td>Term-to-Term Rule</td><td>First 5 Terms</td></tr><tr><td>3</td><td>Add 6</td><td>3, 9, 15, 21, 27, ...</td></tr><tr><td>8</td><td>Subtract 2</td><td>8, 6, 4, 2, 0, ...</td></tr><tr><td>12</td><td>Add 7</td><td>12, 19, 26, 33, 40, ...</td></tr><tr><td>-4</td><td>Subtract 5</td><td>-4, -9, -14, -19, -24, ...</td></tr><tr><td>½</td><td>Add ½</td><td>½, 1, 1½, 2, 2½, ...</td></tr></table>	M763, M106, M288, M381, M241
2	Position-to-term rules	We can work out any number of terms of an arithmetic sequence by substituting values into the nth term. This is known as the **position-to-term rule** as you can calculate the term, given its position in the sequence.	Generate the first 5 terms of the sequence $5n - 7$. When $n = 1$, $(5 \times 1) - 7 = -2$ When $n = 2$, $(5 \times 2) - 7 = 10 - 7 = 3$ When $n = 3$, $(5 \times 3) - 7 = 15 - 7 = 8$ When $n = 4$, $(5 \times 4) - 7 = 20 - 7 = 13$ When $n = 5$, $(5 \times 5) - 7 = 25 - 7 = 18$ The first 5 terms of the sequence $5n - 7$ are -2, 3, 8, 13, and 18.	M381, M241, M509, M327, M166, M991, M866
3	Ratio	Ratio compares the size of one part to another part. Written using the : symbol.	$3 : 1$	M698, M939, M235, M885, M543, M267, M801, M525
4	Scale diagrams	A scale drawing is an **enlargement** of an **object.** An enlargement changes the size of an object by multiplying each of the lengths by a **scale factor** to make it **larger** or **smaller**. The scale of a drawing is usually stated as a **ratio**.	A plan of a block of flats has the scale 2.5cm:800m. What is the real distance represented by 5.7cm on the plan? Dividing both sides by 2.5, we get 1cm:320m $320 \times 5.7 = 1\ 824$ 1 824m	M885, M801, M543, M112