

Y7 Maths Knowledge Organiser Topic 16: Time

What must I be able to do?	Key vocabulary	
<ul style="list-style-type: none"> <input type="checkbox"/> Measure time <input type="checkbox"/> Calculate with time <ul style="list-style-type: none"> ➤ Sparx M627, M515 <input type="checkbox"/> Solve time word problems <ul style="list-style-type: none"> ➤ Sparx M747, M963 	Hour	Sixty minutes.
	Minute	Sixty seconds.
	Second	There are sixty seconds in one minute.
	Day	Twenty four hours.
	Month	A year is split into 12 months. Different months have a different number of days. 30 or 31 days and February has 28 and 29 in a leap year.
	Year	365 days, or 366 days in a leap year.

Calculating with time

e.g. A television programme starts at 07:10 and finishes at 09:15. How long is it on for?

From 07:10 to 08:00 is 50 minutes. From 08:00 to 09:00 is 1 hour. From 09:00 to 09:15 is 15 minutes. So in total it is 50 minutes + 1 hour + 15 minutes. 50 minutes + 15 minutes = 65 minutes = 1 hour 5 minutes. So in total it is 2 hours 5 min.

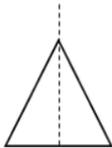
This is 24hr notation. It is the same as 9:15 am.

Y7 Maths Knowledge organiser Topic 17: Symmetry and Tessellation

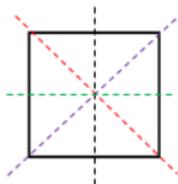
What must I be able to do?	Key vocabulary	
<ul style="list-style-type: none"> <input type="checkbox"/> Identify lines of symmetry in any shape <ul style="list-style-type: none"> ➤ Sparx M523 <input type="checkbox"/> Identify the order of rotational symmetry in any shape <ul style="list-style-type: none"> ➤ Sparx M523 <input type="checkbox"/> Create shapes given details of their symmetries <input type="checkbox"/> Investigate and create tessellations 	Line Symmetry	A line of symmetry is an imaginary line where you could fold a picture and both halves would be exactly the same, although flipped over.
	Rotational Symmetry	A shape has rotational symmetry if it looks exactly the same after being rotated. The number of times it matches during one full rotation is called its order of rotational symmetry. Every shape has an order of at least 1.
	Tessellation	A pattern of repeated shapes, which fit together closely without gaps or overlapping.

Line Symmetry

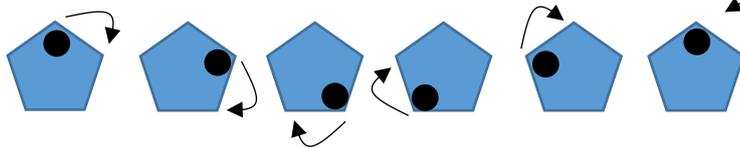
An isosceles triangle has 1 line of symmetry



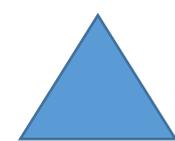
A square has 4 lines of symmetry



Rotational Symmetry



Through 1 full turn (360°) about its center, a regular pentagon looks the same as its starting position 5 times. It has order of rotation 5.



An equilateral triangle has order of rotation 3



A rectangle has order of rotation 2



A square has order of rotation 4

Tessellation

Not all shapes tessellate. The only regular polygons which tessellate on their own are squares, equilateral triangles and hexagons. Some shapes can be combined to create other tessellation patterns but the key is that there are no gaps left.

