

# Y9 Maths Knowledge Organiser Topic 10: Constructions and Loci

<p><b>What must I be able to do?</b></p> <p>You may need to revise the following:</p> <ul style="list-style-type: none"> <li>• <a href="#">Year 7 Topic 11: Constructions and Classifying 2D Shapes</a></li> </ul> <p><b>New content:</b></p> <ul style="list-style-type: none"> <li>• Construct a triangle knowing all 3 sides by using a compass                     <ul style="list-style-type: none"> <li>➤ Sparx M565</li> </ul> </li> <li>• Construct an angle bisector                     <ul style="list-style-type: none"> <li>➤ Sparx M232</li> </ul> </li> <li>• Construct a perpendicular bisector                     <ul style="list-style-type: none"> <li>➤ Sparx M239</li> </ul> </li> <li>• Construct a 90° angle from a point</li> <li>• Draw a locus for a given rule                     <ul style="list-style-type: none"> <li>➤ Sparx M253</li> </ul> </li> </ul>	<p><b>Key vocabulary</b></p> <table border="1" style="width: 100%;"> <tr> <td style="width: 50%;"><b>Bisector</b></td> <td>The <u>line</u> which splits something in <u>half</u>.</td> </tr> <tr> <td><b>Loci (plural locus)</b></td> <td><u>All</u> the possible positions or <u>points</u> which fit a <u>rule</u>.</td> </tr> <tr> <td><b>Equidistant</b></td> <td>The <u>same distance</u> from something at all times.</td> </tr> </table>	<b>Bisector</b>	The <u>line</u> which splits something in <u>half</u> .	<b>Loci (plural locus)</b>	<u>All</u> the possible positions or <u>points</u> which fit a <u>rule</u> .	<b>Equidistant</b>	The <u>same distance</u> from something at all times.
<b>Bisector</b>	The <u>line</u> which splits something in <u>half</u> .						
<b>Loci (plural locus)</b>	<u>All</u> the possible positions or <u>points</u> which fit a <u>rule</u> .						
<b>Equidistant</b>	The <u>same distance</u> from something at all times.						

**SSS Triangle**

Draw the 1<sup>st</sup> side as a base

Set the compass to the lengths of 2<sup>nd</sup> and 3<sup>rd</sup> sides by using a ruler

Use a ruler to connect the ends of the base to the overlap

**Angle bisector**

Compass stays the same size for these 2 arcs

**Perpendicular bisector**

Compass over half the length of the line

Compass must be the same size as before

**90° angle from a point**

Compass stays the same size for these 2 arcs

**Standard Loci**

<p>Equidistant from a point</p>	<p>Equidistant from a line</p>	<p>Equidistant from 2 points</p> <p>The same as a perpendicular bisector</p>	<p>Equidistant from 2 lines</p> <p>The same as an angle bisector</p>
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