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| **F Unit 6:**  **Constructions: triangles, nets, plan and elevation, loci, scale drawings and bearings.** | | **Year 10 Road Map** | | | | |
| In this unit you will learn about Geometry & Measures. The aims are as follows:  **LG1**: Knowledge **LG2**: Application **LG3**: Skills  Assessment Grades: | | | | | | |
|  | Understand clockwise and anticlockwise; | | Video  Clips | R A G |  |  |
| 1 | Draw circles and arcs to a given radius or given the diameter; | |  |  |  |  |
| 2 | Measure and draw lines, to the nearest mm; | |  |  |  |  |
| 3 | Measure and draw angles, to the nearest degree; | | 46a, 46b |  |  |  |
| 4 | Know and use compass directions; | |  |  |  |  |
| 5 | Draw sketches of 3D solids; | | 43 |  |  |  |
| 6 | Know the terms face, edge and vertex; | | 43 |  |  |  |
| 7 | Identify and sketch planes of symmetry of 3D solids; | | 11 |  |  |  |
| 8 | Use isometric grids to draw 2D representations of 3D solids; | |  |  |  |  |
| 9 | Make accurate drawings of triangles and other 2D shapes using a ruler and a protractor; | | 47 |  |  |  |
| 10 | Construct diagrams of everyday 2D situations involving rectangles, triangles, perpendicular and parallel lines; | | 9, 47 |  |  |  |
| 11 | Understand and draw front and side elevations and plans of shapes made from simple solids; | | 51 |  |  |  |
| 12 | Given the front and side elevations and the plan of a solid, draw a sketch of the 3D solid. | | 51 |  |  |  |

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| **Construction, Loci and bearing** | | | | | |
| 14 | Understand congruence, as two shapes that are the same size and shape; | 12b |  |  |  |
| 15 | Visually identify shapes which are congruent; | 12b |  |  |  |
| 16 | Use straight edge and a pair of compasses to do standard constructions | 147 |  |  |  |
| 17 | Understand that triangles satisfying SSS, SAS, ASA and RHS are unique, but SSA triangles are not; | 166 |  |  |  |
| 18 | Construct  a) the perpendicular bisector of a given line  b) the perpendicular from a point to a line c) the bisector of a given angle, d) angles of 90°, 45°; | 145a |  |  |  |
| 145b, 145c |  |  |  |
| 19 | Draw & construct diagrams from given instructions, including the following: a) a region bounded by a circle and an intersecting line, b) a given distance from a point and a given distance from a line c) equal distances from two points or two line segments; | 146 |  |  |  |
| 20 | Find & describe regions satisfying a combination of loci (regions may be defined by ‘nearer to’ or ‘greater than’) | 146 |  |  |  |
| 21 | Use constructions to solve loci problems (2D only); | 146 |  |  |  |
| 22 | Use & interpret maps and scale drawings; | 38 |  |  |  |
| 23 | Estimate lengths using a scale diagram; |  |  |  |  |
| 24 | Make an accurate scale drawing from a diagram; |  |  |  |  |
| 25 | Use three-figure bearings to specify direction; | 124 |  |  |  |
| 26 | Mark on a diagram the position of point *B* given its bearing from point *A*; | 124 |  |  |  |
| 27 | Give a bearing between the points on a map or scaled plan; | 124 |  |  |  |
| 28 | Given the bearing of a point *A* from point *B*, work out the bearing of *B* from *A*; | 124 |  |  |  |
| 29 | Use accurate drawing to solve bearings problems; | 124 |  |  |  |
| 30 | Solve locus problems including bearings. | 124 |  |  |  |
| Student’s comments or questions: | | | | | |