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| **F Unit 19: Congruence, similarity and vectors** | **Road Map** |
| In this unit you will learn about Geometry & Measures. The aims are as follows:**LG1**: Knowledge**LG2**: Application**LG3**: Skills | Assessment Grades |  |  |
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| **Themes** | **Learning Goals/Outcomes/Content** |  |  |  |
| 19a Similarity and Congruence in 2d.  | Use the basic congruence criteria for triangles (SSS, SAS, ASA and RHS); |  |  |  |
| Solve angle problems involving congruence; |  |  |  |
| Identify shapes which are similar; including all circles or all regular polygons with equal number of sides; |  |  |  |
| Understand similarity of triangles and of other plane shapes, use this to make geometric inferences, and solve angle problems using similarity; |  |  |  |
| Identify the scale factor of an enlargement of a shape as the ratio of the lengths of two corresponding sides;  |  |  |  |
| Understand the effect of enlargement on perimeter of shapes;  |  |  |  |
| Solve problems to find missing lengths in similar shapes; |  |  |  |
| Know that scale diagrams, including bearings and maps are ‘similar’ to the real-life examples. |  |  |  |
| 19b Vectors | Understand and use column notation in relation to vectors;  |  |  |  |
| Be able to represent information graphically given column vectors; |  |  |  |
| Identify two column vectors which are parallel;  |  |  |  |
| Calculate using column vectors, and represent graphically, the sum of two vectors, the difference of two vectors and a scalar multiple of a vector.  |  |  |  |

**Links:**

LG1: You will know the rules for congruence, and will be able to work out when two shapes are similar. You will know the column form for vectors.

LG2: You will apply the processes from this topic to calculate missing side lengths in similar shapes and to understand the effect of similarity on area and volume. You will be able to use vectors to establish whether two lines are parallel.

LG3: You will use your problem solving skills and mastery of this topic to make links between similarity and other areas of maths such as scale drawings or bearings.