**Knowledge Organiser**

**Autumn Term 1 Set 1 Year 11**

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| **Topic** | **Self-Assessment** | **Independent Learning and**  **homework tasks** | |
| **MyMaths** | **CorbettMaths.com** |
| Recognise and use the equation of a circle to find circle centre and radius, equation of tangent |  | Algebra, Graphs, Equation of a circle | Video 372 |
| Use coordinates in 3D |  | Algebra, Coordinates, 3D coordinates | Video 86 |
| Understanding vectors and solving geometric problems using vectors |  | Shape, Vectors, Vectors 1 & 2 | Video 353 |
| Drawing trig graphs for sin, cos and graph functions |  | Shape, Trigonometry, Sine and Cosine Graphs / Tan Graphs | Video 338 - 340 |
| Use trig graphs to find angles greater than 90 degrees |  | Shape, Trigonometry, Sine and Cosine Graphs / Tan Graphs | Video 338 - 340 |
| Using sine and cosine rule to find missing angles and lengths of triangles |  | Shape, Trigonometry, Sine Rule / Cosine Rule missing sides / angles | Video 333 - 336 |
| Using trig formula to find area of a triangle |  | Shape, Trigonometry, Trig Area of a Triangle | Video 337 |
| Be able to use of f(x), fg(x) and f−1(x) notation |  | Algebra, Functions, Functions 1 |  |
| Understanding ‘inverse function’ and ‘composite function’ |  | Algebra, Functions, Functions 2 | Video 369 - 370 |
| Find approximate solutions to equations numerically using iteration |  | Algebra, Equations – approx. solutions, Iterations | Video 373 |
| Sketch graphs of y=af(x), y =f(ax), y=f(x)+a, y=f(x+a) given the graph of y=f(x) |  | Algebra, Graphs, Transforming Graphs 1 & 2 | Video 323 - 4 |

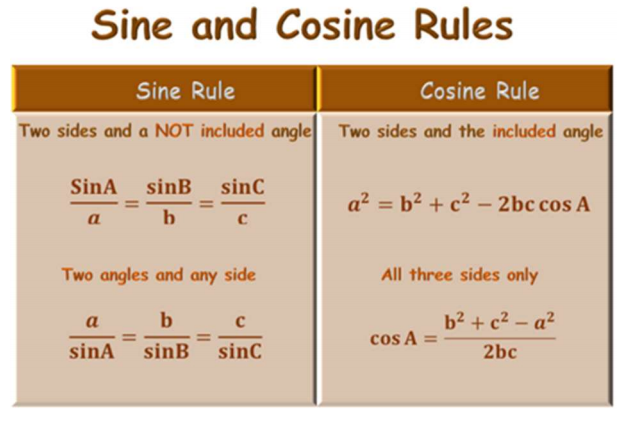
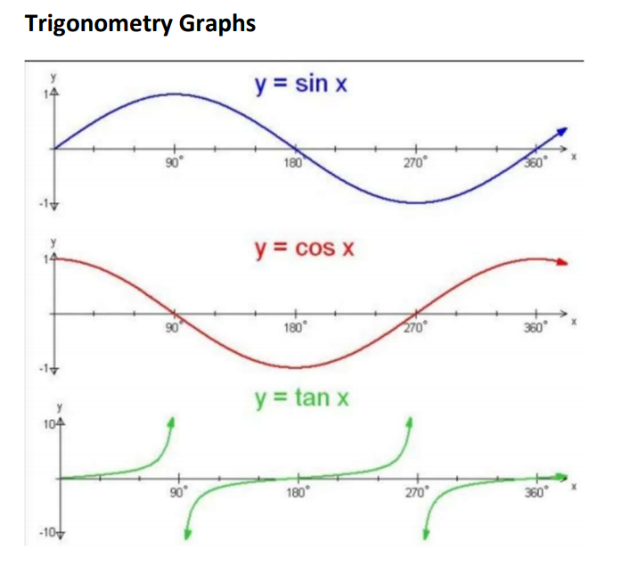
**Stretch and Challenge:**

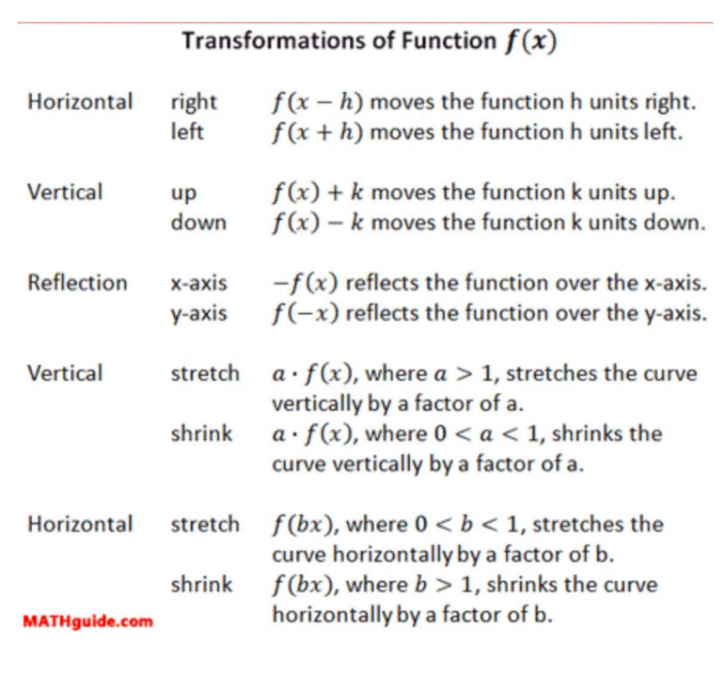
1. Practise UKMT Intermediate Maths Challenge Past papers on:

https://www.ukmt.org.uk/competitions/solo/intermediate-mathematical-challenge/archive

1. Set up an account on parallel.org.uk website, using your school email address and use teacher code “ha52kh”
2. Attend Puzzle Club one lunch time each week

**Autumn Term 1 Knowledge**





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**Scan for full list of Maths facts**