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Curriculum Planning Template

Subject: Maths Year 11 Ability Higher

Half Term 2 / weeks	**Week 1**	**Week 2-3**	**Week 4-6**	**Final week of the half term**
Topic	Unit 35 - Trig Graphs	Unit 36 - Sets and Venn Diagrams	Unit 37 – Equations of Circles	Reteach and Retention
Topic overview **Students will learn…**	To recall and apply trig skills graphically. Using these to find and ratify unknown values.	To recall probability skills in the context of Venn diagrams both requiring population and provided.	To recall and apply straight line skills including gradients, applying them to circle contexts including intersections	Focus on the process of reteach and retention for this half term, knitting together the learning in reaction to the assessments completed. Students will follow a bespoke set of lessons looking at errors seen this in the work covered in this half term and any supporting knowledge. If this is covered staff will look forward to cover historic supporting knowledge for the next half term.
Components	Students should be able: • To use special triangles to find exact trig values • To use exact values in calculations • To plot and recognise trig graphs • To find angles using trig graphs	Students should be able: • To understand the definition of a set and use set notation. • To sort and place sets of objects into Venn diagrams. • To work out probabilities from Venn diagrams.	Students should be able: • To know the general form of equation of a circle • To create and interpret the equation of a circle • To find the equation of a tangent to a circle at a specific point • To use solve simultaneous equations including circles • To use points of intersection to find the length of a chord where a line intersects a circle	Staff complete a program of adaptive reteaching on specific topics based on the individual/class needs within their groups that have been flagged in this block of learning. Regular assessments are used to identify gaps in learning. Any gaps found are then addressed in lessons to help support learning and retention. Clear areas for improvement are monitored by individual staff and at a departmental level.
What students should already know (prior learning components)	Students should be able to use axes and coordinates to specify points in all four quadrants. Students should be able to recall and apply Pythagoras' Theorem and trigonometric ratios. Students should be able to substitute into formulae.	Students should understand that a probability is a number between 0 and 1, and distinguish between events which are impossible, unlikely, even chance, likely, and certain to occur. Students should be able to mark events and/or probabilities on a probability scale of 0 to 1. Students should know how to add and multiply fractions and decimals. Students should have experience of expressing one number as a fraction of another number.	Students should have practical experience of drawing circles with compasses. Students should recall the words, centre, radius, diameter and circumference. Students should recall the relationship of the gradient between two perpendicular lines. Students should be able to find the equation of the straight line, given a gradient and a coordinate.	All the half term content will have been covered by this point. Staff will use departmental tracking documents to analyse the gaps in learning from the most recent assessments and all previous assessments. The ability to structure and breakdown a problem-solving question as exemplified in the TFI questions throughout the course.

Transferrable knowledge (skills)	The topic will build students' confidence with trig and transformations of graphs. These skills will be used again when asked to complete more complicated questions that require alternative trig values for angles and function notation and transformation of graphs (often trig). This knowledge is reused frequently at KS5.	The use of Venn will itself be used to help student visualise problems to allow sorting of information and then used in KS5 stats. The probability skills needed here will also reinforce probability tree diagram style questions and simpler questions requiring notation.	The topic will build students' confidence with straight lines. It also uses and support circle knowledge and plotting of quadratics. This knowledge is reused frequently at KS5.	This activity should serve to highlight and address areas of weakness in teaching and learning or retention. This early intervention to understand specific key areas for improvement or development. This should help to build confidence and improve students' ability to answer these and directly sequential problems.
Key vocabulary student will know and learn	Axes, coordinates, sine, cosine, tan, angle, graph, transformations, side, angle, inverse, square root	Probability, mutually exclusive, conditional, tree diagrams, sample space, outcomes, theoretical, relative frequency, Venn diagram, fairness, experimental	Radius, centre, tangent, circumference, diameter, gradient, perpendicular, reciprocal, coordinate, equation, substitution	
Assessment activities	Homework: Sparx – Trig Graphs	Homework: Sparx – Sets and Venn Diagrams	Homework: Sparx – Equations of Circles	AFL and adaptive teaching will continue to support staff to assess the address areas.
Resources available	Sparx Clips: U450, U627 Departmental lesson folder Departmental resource folder www.corbettmaths.com www.justmaths.co.uk www.mathsbox.org.uk www.mathsgenie.co.uk www.mathspad.co.uk	Sparx Clips: M419, M829, M834, U296, U476, U478 Departmental lesson folder Departmental resource folder www.corbettmaths.com www.justmaths.co.uk www.mathsbox.org.uk www.mathsgenie.co.uk www.mathspad.co.uk	Sparx Clips: U567 Departmental lesson folder Departmental resource folder www.corbettmaths.com www.justmaths.co.uk www.mathsbox.org.uk www.mathsgenie.co.uk www.mathspad.co.uk	Before any assessments are completed, revision and guidance materials are provided for students to assist in independent study.
Notes **Why this topic is important…**	The unit starts with the generation of the trig graphs and how these can be used to predict other trig values due the cyclic nature of the function. The unit builds towards students possibly looking at CAST diagrams often used in KS5. A recall of transformation of graphs should also be looked at this point as these units often overlap.	The unit starts with students asked to sort information into groups that have things in common to create Venn diagrams. This is then built upon by introducing unit specific notation and the meanings these hold. The unit finishes with students required to answer probability questions including conditional problems	The unit requires students to understand all elements of straight lines especially gradients. The unit uses these in the context of a circle and how these can be applied to a circle. Intersection points in and out of the circle could be used to answer complex questions including regions and mapped areas.	This is an important point in the curriculum plan that enables individual teachers to review the gaps in learning for the classes they teach. The half-termly assessments are used to track students' progress and enable teachers to react quickly to any gaps in knowledge and prepare students for the next assessment. The feedback and modelling of the exam answers enables students to pick up exam techniques and the ability to communicate effectively.