

Circle Theorems

Objective	Sparx Task	
1.Recall circle theorems including:		
- angle in a semi circle is a right angle		
- a perpendicular line from the centre will bisect the chord.		
- angles in the same segment are equal	U251	
- opposite angles in a cyclic quadrilateral add up to 180	U251	
- angle subtended at the centre is twice the angles subtended at the circumference	U459	
They should also be aware that a triangle made within a circle with two radii, will be isosceles.		
2.Apply the above theorems to solve problems with missing angles	U808	
3.Recall the other theorems including:		
- alternate segment theorem	U130	
- tangent will meet a radius at 90	U489	
- tangents that form an external point will be equal in length.	U489	
4.Apply all circle theorems to find missing angle. Give reasoning throughout	U951	
5.Proof with circle theorems	U807	
6.Recognise the equation of a circle centred on the origin and be able to graph it.	U567	
7.Find the equation of a tangent by using gradient of the radius	U567	
8.Find the equation of a tangent by understanding perpendicular lines and gradients.	U898	

Revision: Probability

Objective	Sparx Task	
1.Find single event probabilities including compliments and probabilities of events not happening.	U804	
2.List all outcomes of single and combined events systematically.	U104	
3.Understand experimental and theoretical probability.	U845	
4.Find relative frequency and expected out comes from experimental data.	U166	
5.Understand independent and mutually exclusive events.	U683	
6.Use tree diagrams to find probabilities of independent and dependant events.	U558	

	U729	
7. Use two way tables to find probabilities, including conditional.	U246	
8. Use a Venn diagram to represent real life situations.	U476	
9. Use a Venn diagram to find conditional probabilities.	U699	
10. Use intersection and union notation.	U748 U296	
11. Compare experimental/ theoretical probabilities and make inferences.	U775	

Further Formulae & Algebraic Expressions

Objective	Sparx Task	
1. Rationalise the denominator of a surd.	U633 U338 U872 U499 U707 U281	
2. Simplify algebraic fractions.	U437 U103 U294	
3. Perform operations with algebraic fractions	U685 U457 U824	
4. Solve equations arising from algebraic fractions		
5. Rearrange a formula in cases where the subject appears more than once.	U556	
6. Rearrange a formula where the variables are in the denominators of fractions	U413 U573	
7. Solve algebraic proof questions that involve consecutive integers (n , $n+1$), squares, odd/ even integers etc.	U582	
8. Understand function notation. Carry out substitutions and solve equations that involve functions	U637	
9. Find composite functions	U448	
10. Find the inverse of a function	U996	

