

## Personalised Learning Checklist

Subject: Maths

Year group: Stage 10



Dear Student,

The list below is the learning you should have completed. Your teacher will use the list to check your progress during this time. It may be used for short quizzes, mini assessments or homework. Where there are gaps your lessons will focus on improving your knowledge and understanding.

Objective	My personal RAG rating (Red- do not understand, Amber- some understanding, Green- I am confident)			Teacher RAG rating
	RED	AMBER	GREEN	
• Appreciate that the ratio of corresponding sides in similar triangles is constant	RED	AMBER	GREEN	
• Choose an appropriate trigonometric ratio that can be used in a given situation	RED	AMBER	GREEN	
• Understand that sine, cosine and tangent are functions of an angle	RED	AMBER	GREEN	
• Establish the exact values of $\sin\theta$ and $\cos\theta$ for $\theta = 0^\circ, 30^\circ, 45^\circ, 60^\circ$ and $90^\circ$	RED	AMBER	GREEN	
• Establish the exact value of $\tan\theta$ for $\theta = 0^\circ, 30^\circ, 45^\circ$ and $60^\circ$	RED	AMBER	GREEN	
• Use a calculator to find the sine, cosine and tangent of an angle	RED	AMBER	GREEN	
• Know the trigonometric ratios, $\sin\theta = \text{opp/hyp}$ , $\cos\theta = \text{adj/hyp}$ , $\tan\theta = \text{opp/adj}$	RED	AMBER	GREEN	
• Set up and solve a trigonometric equation to find a missing side in a right-angled triangle	RED	AMBER	GREEN	
• Set up and solve a trigonometric equation when the unknown is in the denominator of a fraction	RED	AMBER	GREEN	
• Set up and solve a trigonometric equation to find a missing angle in a right-angled triangle	RED	AMBER	GREEN	
• Use trigonometry to solve problems involving bearings	RED	AMBER	GREEN	
• Use trigonometry to solve problems involving an angle of depression or an angle of elevation	RED	AMBER	GREEN	
• Add and subtract algebraic fractions	RED	AMBER	GREEN	
• Multiply and divide algebraic fractions	RED	AMBER	GREEN	
• Simplify an algebraic fraction	RED	AMBER	GREEN	
• Expand the product of three binomials	RED	AMBER	GREEN	
• Expand the product of two binomials involving surds	RED	AMBER	GREEN	
• Factorise an expression involving the difference of two squares	RED	AMBER	GREEN	
• Factorise a quadratic expression of the form $ax^2 + bx + c$ (a is prime)	RED	AMBER	GREEN	
• Factorise a quadratic expression of the form $ax^2 + bx + c$ (a is composite)	RED	AMBER	GREEN	
• Identify when factorisation of the numerator and/or denominator is needed to simplify an algebraic fraction	RED	AMBER	GREEN	
• Simplify an algebraic fraction that involves factorisation	RED	AMBER	GREEN	
• Change the subject of a formula when more than two steps are required	RED	AMBER	GREEN	
• Change the subject of a formula when the required subject appears twice	RED	AMBER	GREEN	

• Interpret graphs and equations that describe direct proportion	RED	AMBER	GREEN	
• Interpret graphs and equations that describe inverse proportion	RED	AMBER	GREEN	
• Solve problems involving the combining of ratios	RED	AMBER	GREEN	
• Solve complex problems combining understanding of fractions, percentages and/or ratio	RED	AMBER	GREEN	
• Solve more complex problems involving density	RED	AMBER	GREEN	
• Solve more complex problems involving pressure	RED	AMBER	GREEN	
• Solve more complex problems involving speed	RED	AMBER	GREEN	