

YEAR 11 MATHEMATICS PASSPORT



Personal Learning Checklist

HIGHER TIER

Name: _____

Teacher: _____

My Target Grade is _____

		Green - Got It	Purple - Progressing	Yellow - Not There Yet			
MW Clip	Grade	Topic			Journey to Success		
PROBABILITY							
90a	D	Simple probability (a) Listing outcomes					
90b	D	Simple probability (b) Listing probabilities					
91	D	Mutually exclusive events					
132	C	Experimental probability					
153	B	Simple tree diagrams					
154	B	Harder tree diagrams					
182	A & A*	Probability-And Or questions					
SURVEYS, QUESTIONNAIRES AND DATA COLLECTION							
84	D	Questionnaires & data collection					
134	C	Designing a good questionnaire					
183	A & A*	Stratified sampling					
STATISTICAL CALCULATIONS, MEASURES OF TENDENCY AND MEASURES OF SPREAD							
133a	C	Averages from a table (a) Basics					
133b	C	Averages from a table (b) Estimate for the mean					
151	B	Cumulative frequency					
152	B	Box plots					
STATISTICAL DIAGRAMS							
85	D	Two way tables					
86	D	Pie charts					
87	D	Scatter graphs					
88	D	Frequency diagrams					
89	D	Stem and leaf diagrams					
181	A & A*	Histograms					

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CALCULATIONS								
50	D	Value for money						
59	D	BODMAS/BIDMAS						
60	D	Long multiplication with decimals						
63	D	Hard calculator questions						
64	D	Real life money calculations						
99	C	Four rules of negatives						
100	C	Dividing by a 2-digit decimals						
126	C	Compound measures						
FRACTIONS, DECIMALS AND PERCENTAGES								
47	D	Equivalent fractions						
48	D	Simplifying fractions						
49	D	Ordering fractions						
51	D	% of an amount with calculator						
52	D	% of an amount without calculator						
53	D	Change to % with calculator						
54	D	Change to % without calculator						
55	D	Finding a fraction of an amount						
56a	D	Addition & subtraction of fractions a) Standard method						
56b	D	Addition & subtraction of fractions b) Quick-fix method						
57	D	Multiplying and dividing fractions						
58	D	Changing fractions to decimals						
92	C	Percentages - overview						
93	C	% Increase/decrease						
98	C	Recurring decimals to fractions						
136	B	% increase & decrease						
137	B	Compound interest & depreciation						
138	B	Reverse percentage						
139a	B	Four rules of fractions a) Addition & subtraction						
139b	B	Four rules of fractions b) Multiplication & division						
155	A & A*	Recurring decimals						
158	A & A*	Rationalising the denominator						
RATIOS, PROPORTIONS AND RATES OF CHANGE								
61	D	Ratio						
62	D	Proportion recipe questions						
94	C	Ratio						
159	A & A*	Direct and inverse proportion						
ROUNDING AND ESTIMATING								
101	C	Estimating answers						
160	A & A*	Upper and lower bounds						
SETS OF NUMBERS								
44	D	Factors, multiples & primes						
45	D	Evaluate powers						
46	D	Understand squares, cubes & roots						
95	C	Product of prime factors						
96	C	HCF & LCM						
97	C	Place Value						
135a	B	Standard form a) Basics						
135b	B	Standard form b) Calculation						
156	A & A*	Fractional and negative indices						
157	A & A*	Surds						

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EXPRESSIONS AND FORMULAE								
66	D	Substitution						
102a	C	Algebra simplification a) Addition & Subtraction						
102b	C	Algebra simplification b) Multiplication						
103a	C	Expanding brackets a) Single brackets						
103b	C	Expanding brackets b) Double brackets						
104	C	Factorisation						
106	C	Forming equations						
107	C	Changing the subject of a formula						
111	C	Index notation for \times & \div						
162	A & A*	Proof						
163a	A & A*	Algebraic fractions a) Simplifying						
163b	A & A*	Algebraic fractions b) Solving equations involving fractions						
164	A & A*	Rearranging difficult formulae						
GRAPHS								
78	D	Finding the midpoint of a line						
113	C	Drawing straight line graphs						
114	C	Finding the equation of a straight line						
116	C	Drawing quadratic graphs						
117	C	Real-life graphs						
143	B	Understanding $y=mx+c$						
144	B	Regions						
145	B	Graphs of cubic functions						
146	B	The shape of functions						
148	B	3D Co-ordinates						
166	A & A*	Gradient: parallel and perpendicular lines						
167	A & A*	Transformation of functions						
168	A & A*	Graphs of trig functions						
169	A & A*	Transformation of trig functions						
170	A & A*	Graphs of exponential functions						
172	A & A*	Equations of circles						
SEQUENCES								
65	D	Generate a sequence from the nth term						
112	C	Finding the nth term						
SOLVING EQUATIONS								
105a	C	Solving equations a) Balancing method						
105b	C	Solving equations b) Float & ping method						
108	C	Inequalities						
109	C	Solving inequalities						
110	C	Trial and improvement						
115	C	Solving simultaneous equations graphically						
140a	B	Solving quadratics (Factorising) a) Easy questions						
140b	B	Solving quadratics (Factorising) b) Hard questions						
141	B	The difference of two squares						
142a	B	Simultaneous equations a) Fast method						
142b	B	Simultaneous equations b) Simpler method						
161a	A & A*	Solving quadratic equations a) Using the formula						
161b	A & A*	Solving quadratic equations b) Forming and solving						
161c	A & A*	Solving quadratic equations c) Completing the square						
165	A & A*	Simultaneous equations (quadratics)						

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ANGLES								
67	D	Parallel lines						
68	D	Angle sum of a triangle						
70	D	Angles of regular polygons						
79	D	Measuring and drawing angles						
80	D	Drawing triangles						
131	C	Bearings						
149	B	Similar shapes						
150	B	Circle theorems						
LENGTHS, AREA AND VOLUME								
71	D	Areas of circles						
72	D	Circumferences of circles						
73	D	Areas of compound shapes						
120	C	Surface area of cuboids						
121	C	Surface area of triangular prisms						
122	C	Volume of a prism						
176	A & A*	Area of triangles: $\frac{1}{2}ab\sin c$						
177a	A & A*	Cones and spheres a) Typical exam q's						
177b	A & A*	Cones and spheres b) Harder exam q's						
178	A & A*	Segments of circles and frustums of cones						
MEASURES AND MEASURING								
124	C	Converting metric units						
125	C	Bounds						
SHAPE (INCLUDING PYTHAGORAS AND TRIGONOMETRY)								
69	D	Properties of special triangles						
81	D	Plans and elevations						
82	D	Nets						
118	C	Pythagoras' Theorem						
119	C	Pythagoras - Line on a graph						
127	C	Bisecting a line						
128	C	Drawing a perpendicular to a line						
129	C	Bisecting an angle						
130	C	Loci						
147a	B	Trigonometry a) Using formulae						
147b	B	Trigonometry b) Using SOH CAH TOA						
147c	B	Trigonometry c) Bearings by trigonometry						
173	A & A*	Sine and Cosine rules						
174	A & A*	Pythagoras in 3-D						
175	A & A*	Trigonometry in 3-D						
180	A & A*	Vectors						
TRANSFORMATIONS AND SYMMETRY								
74	D	Rotations						
75	D	Reflections						
76	D	Enlargements						
77	D	Translations						
83	D	Symmetries						
123	C	Similar shapes						
171	A & A*	Enlargements: negative scale factor						
179	A & A*	Congruent triangles						