

### **Year 12 transition course**

As you transition from Year 11 to Year 12, it is very important to refresh your memory on certain core mathematical skills. Moreover, it is vital that you have a sound understanding of some more difficult skills. In the tables below, you will find 180 skills that you should be confident with as you start Year 12. Get 100% on each and use the videos if you are stuck.

### Number

Topics	Clip Number	R	Α	G
Indices, powers & roots				
Index form 1 (intro)	102			
Index form 2 (power of 0 & 1)	103			
Index form 3 (power of negative integers)	104			
Index form 4 (multiplying indices)	105			
Index form 5 (dividing indices)	106			
Index form 6 (power of power rule)	107			
Index form 7 (powers of unit fractions)	108			
Index form 8 (powers of non-unit fractions)	109			
Index form 9 (combination of rules)	110			
Multiplication & division with surds 1	113			
Multiplication & division with surds 2	114			
Simplifying surds	115			
Brackets involving surds 1	116			
Brackets involving surds 2	117			
Rationalising surds 1	118			
Rationalising surds 2	119			
Order of operations 3 (indices & roots)	120			

### Algebra

Topics	Clip Number	R	Α	G
Substitution				
Substitution 1	780			
Substitution 2	781			
Substitution 3	782			
Substitution 4	783			
Substitution 5	784			
Substitution 6	785			
Substitution 7	786			
Substitution 8	787			
Substitution (Equations of motion 1)	788			
Substitution (Equations of motion 2)	789			



### **Year 12 transition course**

### Algebra (continued)

Collecting like terms 2	Topics	Clip Number	R	Α	G
Simplifying expressions involving multiplication 158  Simplifying expressions involving division 159  Expand two single brackets & simplify 161  Expand double brackets 1 162  Expand double brackets 2 163  Expand double brackets 3 164  Expand double brackets 3 164  Expand double brackets 3 166  Expand triple brackets 3 166  HCF of algebraic expressions 1 167  Factorise simple expressions 1 168  Factorise simple expressions 1 169  Simplifying expressions by factorising 1 170  Simplifying expressions by factorising 2 171  Expressions with algebraic fractions 172  Indices with algebraic expressions 2 173  Indices with algebraic expressions 3 175  Indices with algebraic expressions 3 175  Indices with algebraic expressions 3 175  Linear equations  Solve 1 step equations (balance method) 178  Solve 2 step equations (involving multiplication) 179  Solve 2 step equations (involving division) 180  Solve 2 step equations (involving division) 180  Solve 2 step equations (x on denominator) 181  Solve 2 step equations with x on both sides 1 184  Solve equations with x on both sides 1 184  Solve equations with x on both sides 3 186  Solve equations with x on both sides 3 186  Solve equations with x on both sides 3 186  Solve equations with x on both sides 3 186  Solve equations with x on both sides 3 186  Solve equations with x on both sides 3 186  Solve equations with x on both sides 3 186  Solve equations with x on both sides 3 186  Solve equations with x on both sides 3 186  Solve equations with x on both sides 3 186  Solve equations with a separent 1 201  Gradient of a line segment 1 201  Gradient of a line segment 1 201  Gradient of a line segment 2 (negative) 202  Gradient of a line segment 4 (summary) 204  Straight line graphs 2 207  Straight line graphs 3 208	Manipulating expressions				
Simplifying expressions involving division  Expand double brackets & simplify  Expand double brackets 1  Expand double brackets 2  Expand double brackets 2  Expand double brackets 3  Expand drouble brackets 4  Expand triple brackets 4  Expand triple brackets 1  Expand triple br	Collecting like terms 2	157			
Expand two single brackets & simplify  Expand double brackets 1  Expand double brackets 2  Expand double brackets 3  Expand double brackets 3  Expand double brackets 3  Expand brackets (difference of two squares)  Expand triple brackets  HCF of algebraic expressions  166  HCF of algebraic expressions 1  Factorise simple expressions 2  Simplifying expressions by factorising 1  Simplifying expressions by factorising 2  Expressions with algebraic fractions  Indices with algebraic expressions 1  Indices with algebraic expressions 3  Solve 1 step equations (balance method)  Solve 2 step equations (involving multiplication)  Solve 2 step equations (involving division)  Solve 2 step equations (x on denominator)  Solve 2 step equations (x negative)  Solve 3 step equations (x negative)  Solve equations with x on both sides 1  Solve equations with x on both sides 2  Solve equations with x on both sides 3  Solve equations with algebraic fractions  Setup & solve equations by substitution  Inager sequences and graphs  Midpoint of a line segment 1  Gradient of a line segment 2 (negative)  Gradient of a line segment 1 (201  Gradient of a line segment 4 (summary)  204  Straight line graphs 2  Straight line graphs 3	Simplifying expressions involving multiplication	158			
Expand double brackets 1 Expand double brackets 2 Expand double brackets 3 Expand double brackets 3 Expand drackets (difference of two squares) Expand triple brackets 166 Expand triple brackets 166 HCF of algebraic expressions 167 Factorise simple expressions 1 Factorise simple expressions by factorising 1 Simplifying expressions by factorising 2 Expressions with algebraic fractions Indices with algebraic expressions 1 Indices with algebraic expressions 2 Indices with algebraic expressions 2 Indices with algebraic expressions 3 Indices with algebraic (application) Indices with algebraic expressions 3 Indices with algebraic expressions 4 Indices with algebraic expressio	Simplifying expressions involving division	159			
Expand double brackets 2 Expand double brackets 3 Expand brackets (difference of two squares) Expand triple brackets Expand triple brackets 166 Expand triple brackets 167 Factorise simple expressions 1 Factorise simple expressions 1 Factorise simple expressions 1 Factorise simple expressions 2 Simplifying expressions by factorising 1 Factorise simple expressions by factorising 2 Factorise simple expressions 1 Factorise s	Expand two single brackets & simplify	<u>161</u>			
Expand double brackets 3  Expand brackets (difference of two squares)  Expand triple brackets  HCF of algebraic expressions  167  Factorise simple expressions 1  Factorise simple expressions 2  Simplifying expressions by factorising 1  Expressions with algebraic fractions  Indices with algebraic expressions 2  Indices with algebraic expressions 1  Indices with algebraic expressions 2  Indices with algebraic expressions 3  Indices with algebraic expressions 1  Indices with algebraic (xpressions 1  Indices with algebraic (	Expand double brackets 1	162			
Expand brackets (difference of two squares)  Expand triple brackets  HCF of algebraic expressions  Factorise simple expressions 1  Factorise simple expressions 2  Simplifying expressions by factorising 1  Simplifying expressions by factorising 2  Expressions with algebraic fractions  Indices with algebraic expressions 2  Indices with algebraic expressions 2  Indices with algebraic expressions 3  Indices with algebraic expressions 1  Indices with algebraic expressions 3  Indices with algebraic expressions 3  Indices with algebraic expressions 1  Indices with algebraic expressions 3  Indices with algebraic expressions 3  Indices with algebraic expressions 1  Indices with algebraic finction involving multiplication 1  Ind	Expand double brackets 2	163			
Expand triple brackets  HCF of algebraic expressions  Factorise simple expressions 1  Factorise simple expressions 2  Simplifying expressions by factorising 1  Simplifying expressions by factorising 2  Expressions with algebraic fractions  Indices with algebraic expressions 1  Indices with algebraic expressions 2  Indices with algebraic expressions 3  Indices with algebraic expressions 1  Indices with algebraic (involving multiplication)  Indices with algebraic (involving multiplication)  Indices with algebraics (involving multiplication)  Indices with algebraic expressions 1  Indices with algeb	Expand double brackets 3	164			
HCF of algebraic expressions Factorise simple expressions 1 Factorise simple expressions 2 Simplifying expressions by factorising 1 Simplifying expressions by factorising 1 Simplifying expressions by factorising 2 Expressions with algebraic fractions Indices with algebraic expressions 2 Indices with algebraic expressions 2 Indices with algebraic expressions 3 Indices with algebraic five with algebraic fractions Indices with algebraic fractions In	Expand brackets (difference of two squares)	165			
Factorise simple expressions 1  Factorise simple expressions 2  Simplifying expressions by factorising 1  Simplifying expressions by factorising 1  Expressions with algebraic fractions  Indices with algebraic expressions 2  Indices with algebraic expressions 2  Indices with algebraic expressions 3  Indices with algebraic expressions 3	Expand triple brackets	166			
Factorise simple expressions 2  Simplifying expressions by factorising 1  Simplifying expressions by factorising 2  Expressions with algebraic fractions  Indices with algebraic expressions 1  Indices with algebraic expressions 2  Indices with algebraic expressions 3  Indices with algebraic indices in indices with algebraic indices in	HCF of algebraic expressions	167			
Simplifying expressions by factorising 1 170  Simplifying expressions by factorising 2 171  Expressions with algebraic fractions 172  Indices with algebraic expressions 1 173  Indices with algebraic expressions 2 174  Indices with algebraic expressions 3 175  Linear equations  Solve 1 step equations (balance method) 178  Solve 2 step equations (involving multiplication) 179  Solve 2 step equations (involving division) 180  Solve 2 step equations (x on denominator) 181  Solve 2 step equations (x negative) 182  Solve 3 step equations (x negative) 183  Solve equations with x on both sides 1 184  Solve equations with x on both sides 2 185  Solve equations with x on both sides 3 186  Solve equations with x on both sides 3 186  Solve equations with algebraic fractions 187  Setup & solve equations (in context) 188  Simultaneous equations by elimination 4 193  Simultaneous equations by substitution 194  Simultaneous equations (in context) 195  Linear sequences and graphs  Midpoint of a line segment 2 (negative) 202  Gradient of a line segment 2 (negative) 203  Gradient of a line segment 4 (summary) 204  Straight line graphs 1 206  Straight line graphs 3 208	Factorise simple expressions 1	168			
Simplifying expressions by factorising 2  Expressions with algebraic fractions  Indices with algebraic expressions 1  Indices with algebraic expressions 2  Indices with algebraic expressions 3  Indices with algebraic expressions 3  Indices with algebraic expressions 3  Linear equations  Solve 1 step equations (balance method)  Solve 2 step equations (involving multiplication)  Solve 2 step equations (involving division)  Solve 2 step equations (x on denominator)  Solve 2 step equations (x negative)  Solve 3 step equations (x negative)  Solve as step equations (x negative)  Solve equations with x on both sides 1  Solve equations with x on both sides 2  Solve equations with x on both sides 3  Solve equations with x on both sides 3  Solve equations with algebraic fractions  Setup & solve equations (in context)  Simultaneous equations by elimination 4  Simultaneous equations (in context)  Simultaneous equations (in context)  Linear sequences and graphs  Midpoint of a line segment 1  Gradient of a line segment 2 (negative)  Gradient of a line segment 3 (fractions)  Gradient of a line segment 4 (summary)  Straight line graphs 1  Straight line graphs 3  Straight line graphs 3	Factorise simple expressions 2	169			
Expressions with algebraic fractions  Indices with algebraic expressions 1  Indices with algebraic expressions 2  Indices with algebraic expressions 2  Indices with algebraic expressions 3  Indices with algebraic (involving midition)  Indices with algebraic expressions and involving midition and involving	Simplifying expressions by factorising 1	170			
Indices with algebraic expressions 1 Indices with algebraic expressions 2 Indices with algebraic expressions 3 Indices with algebraic finology in a series and graphs Indices with a segment 1 Indices with algebraic fractions Indices with a segment 2 Indices with algebraic fractions Indices with a segment 3 Indices with a segment 4 Indices with algebraic expressions 2 Indices with a segment 3 Indices with algebraic expressions 3 Indices with a segment 4 Indices with algebraic expressions 3 Indices with a segment 3 Indices with a segment 3 Indices with a segment 4 Indices	Simplifying expressions by factorising 2	171			
Indices with algebraic expressions 2 Indices with algebraic expressions 3 Indices with algebraic finoutoxing multiplication) Indices with algebraic finoutoxing multiplication) Indices with algebraic finoutoxing division Indices with algebraic finoutoxing algebraic fino	Expressions with algebraic fractions	172			
Indices with algebraic expressions 3  Linear equations  Solve 1 step equations (balance method)  Solve 2 step equations (involving multiplication)  Solve 2 step equations (involving division)  Solve 2 step equations (x on denominator)  Solve 2 step equations (x on denominator)  Solve 2 step equations (x negative)  Solve 3 step equations  Solve equations with x on both sides 1  Solve equations with x on both sides 2  Solve equations with x on both sides 3  Solve equations with x on both sides 3  Solve equations with x lagebraic fractions  Solve equations with algebraic fractions  Solve equations by elimination 4  Simultaneous equations by substitution  Linear sequences and graphs  Midpoint of a line segment 1  Gradient of a line segment 2 (negative)  Gradient of a line segment 3 (fractions)  Gradient of a line segment 4 (summary)  Straight line graphs 2  Straight line graphs 3	Indices with algebraic expressions 1	173			
Linear equationsSolve 1 step equations (balance method)178Solve 2 step equations (involving multiplication)179Solve 2 step equations (involving division)180Solve 2 step equations (x on denominator)181Solve 2 step equations (x negative)182Solve 3 step equations183Solve equations with x on both sides 1184Solve equations with x on both sides 2185Solve equations with x on both sides 3186Solve equations with algebraic fractions187Setup & solve equations (in context)188Simultaneous equations by elimination 4193Simultaneous equations by substitution194Simultaneous equations (in context)195Linear sequences and graphsMidpoint of a line segment200Gradient of a line segment 1201Gradient of a line segment 2 (negative)202Gradient of a line segment 4 (summary)204Straight line graphs 1206Straight line graphs 2207Straight line graphs 3208	Indices with algebraic expressions 2	174			
Solve 2 step equations (involving multiplication)  Solve 2 step equations (involving multiplication)  Solve 2 step equations (involving division)  Solve 2 step equations (x on denominator)  Solve 2 step equations (x negative)  Solve 3 step equations  Solve equations with x on both sides 1  Solve equations with x on both sides 2  Solve equations with x on both sides 3  Solve equations with x on both sides 3  Solve equations with algebraic fractions  Setup & solve equations (in context)  Simultaneous equations by elimination 4  Simultaneous equations by substitution  Simultaneous equations (in context)  Linear sequences and graphs  Midpoint of a line segment 1  Gradient of a line segment 2 (negative)  Gradient of a line segment 4 (summary)  Straight line graphs 1  Straight line graphs 2  Straight line graphs 3	Indices with algebraic expressions 3	175			
Solve 2 step equations (involving multiplication)  Solve 2 step equations (involving division)  Solve 2 step equations (x on denominator)  Solve 2 step equations (x negative)  Solve 3 step equations  Solve equations with x on both sides 1  Solve equations with x on both sides 2  Solve equations with x on both sides 3  Solve equations with x on both sides 3  Solve equations with algebraic fractions  Setup & solve equations (in context)  Simultaneous equations by elimination 4  Simultaneous equations by substitution  Simultaneous equations (in context)  Linear sequences and graphs  Midpoint of a line segment  Gradient of a line segment 2 (negative)  Gradient of a line segment 3 (fractions)  Gradient of a line segment 4 (summary)  Straight line graphs 1  Straight line graphs 3	Linear equations				
Solve 2 step equations (involving division)  Solve 2 step equations (x on denominator)  Solve 2 step equations (x negative)  Solve 3 step equations  Solve equations with x on both sides 1  Solve equations with x on both sides 2  Solve equations with x on both sides 3  Solve equations with x on both sides 3  Solve equations with algebraic fractions  Setup & solve equations (in context)  Simultaneous equations by elimination 4  Simultaneous equations by substitution  Simultaneous equations (in context)  Linear sequences and graphs  Midpoint of a line segment  Gradient of a line segment 2 (negative)  Gradient of a line segment 3 (fractions)  Gradient of a line segment 4 (summary)  Straight line graphs 1  Straight line graphs 3	Solve 1 step equations (balance method)	178			
Solve 2 step equations (x on denominator)  Solve 2 step equations (x negative)  Solve 3 step equations  Solve equations with x on both sides 1  Solve equations with x on both sides 2  Solve equations with x on both sides 3  Solve equations with x on both sides 3  Solve equations with algebraic fractions  Setup & solve equations (in context)  Simultaneous equations by elimination 4  Simultaneous equations by substitution  Simultaneous equations (in context)  Linear sequences and graphs  Midpoint of a line segment  Gradient of a line segment 1  Gradient of a line segment 2 (negative)  Gradient of a line segment 4 (summary)  Straight line graphs 1  Straight line graphs 3	Solve 2 step equations (involving multiplication)	179			
Solve 2 step equations (x negative)  Solve 3 step equations  Solve equations with x on both sides 1  Solve equations with x on both sides 2  Solve equations with x on both sides 3  Solve equations with x on both sides 3  Solve equations with algebraic fractions  Setup & solve equations (in context)  Simultaneous equations by elimination 4  Simultaneous equations by substitution  Simultaneous equations (in context)  Linear sequences and graphs  Midpoint of a line segment  Gradient of a line segment 1  Gradient of a line segment 2 (negative)  Gradient of a line segment 4 (summary)  Straight line graphs 1  Straight line graphs 3	Solve 2 step equations (involving division)	180			
Solve 3 step equations  Solve equations with x on both sides 1  Solve equations with x on both sides 2  Solve equations with x on both sides 3  Solve equations with x on both sides 3  Solve equations with algebraic fractions  Setup & solve equations (in context)  Simultaneous equations by elimination 4  Simultaneous equations by substitution  Simultaneous equations (in context)  Linear sequences and graphs  Midpoint of a line segment  Gradient of a line segment 1  Gradient of a line segment 2 (negative)  Gradient of a line segment 3 (fractions)  Gradient of a line segment 4 (summary)  Straight line graphs 1  Straight line graphs 3	Solve 2 step equations (x on denominator)	181			
Solve equations with x on both sides 1  Solve equations with x on both sides 2  Solve equations with x on both sides 3  Solve equations with algebraic fractions  Setup & solve equations (in context)  Simultaneous equations by elimination 4  Simultaneous equations by substitution  Simultaneous equations (in context)  Simultaneous equations (in context)  Linear sequences and graphs  Midpoint of a line segment  Gradient of a line segment 1  Gradient of a line segment 2 (negative)  Gradient of a line segment 3 (fractions)  Gradient of a line segment 4 (summary)  Straight line graphs 1  Straight line graphs 3	Solve 2 step equations (x negative)	182			
Solve equations with x on both sides 2  Solve equations with x on both sides 3  Solve equations with algebraic fractions  Setup & solve equations (in context)  Simultaneous equations by elimination 4  Simultaneous equations by substitution  Simultaneous equations (in context)  Linear sequences and graphs  Midpoint of a line segment  Gradient of a line segment 1  Gradient of a line segment 2 (negative)  Gradient of a line segment 3 (fractions)  Gradient of a line segment 4 (summary)  Straight line graphs 1  Straight line graphs 3  208	Solve 3 step equations	183			
Solve equations with x on both sides 3  Solve equations with algebraic fractions  Setup & solve equations (in context)  Simultaneous equations by elimination 4  Simultaneous equations by substitution  Simultaneous equations (in context)  Linear sequences and graphs  Midpoint of a line segment  Gradient of a line segment 1  Gradient of a line segment 2 (negative)  Gradient of a line segment 3 (fractions)  Gradient of a line segment 4 (summary)  Straight line graphs 1  Straight line graphs 3  208	Solve equations with x on both sides 1	184			
Solve equations with algebraic fractions  Setup & solve equations (in context)  Simultaneous equations by elimination 4  Simultaneous equations by substitution  Simultaneous equations (in context)  Linear sequences and graphs  Midpoint of a line segment  Gradient of a line segment 1  Gradient of a line segment 2 (negative)  Gradient of a line segment 3 (fractions)  Gradient of a line segment 4 (summary)  Straight line graphs 1  Straight line graphs 3  208	Solve equations with x on both sides 2	185			
Setup & solve equations (in context)  Simultaneous equations by elimination 4  Simultaneous equations by substitution  Simultaneous equations (in context)  Linear sequences and graphs  Midpoint of a line segment  Gradient of a line segment 1  Gradient of a line segment 2 (negative)  Gradient of a line segment 3 (fractions)  Gradient of a line segment 4 (summary)  Straight line graphs 1  Straight line graphs 3  Straight line graphs 3	Solve equations with x on both sides 3	186			
Simultaneous equations by elimination 4  Simultaneous equations by substitution  Simultaneous equations (in context)  Linear sequences and graphs  Midpoint of a line segment  Gradient of a line segment 1  Gradient of a line segment 2 (negative)  Gradient of a line segment 3 (fractions)  Gradient of a line segment 4 (summary)  Straight line graphs 1  Straight line graphs 2  Straight line graphs 3	Solve equations with algebraic fractions	187			
Simultaneous equations by substitution  Simultaneous equations (in context)  Linear sequences and graphs  Midpoint of a line segment  Gradient of a line segment 1  Gradient of a line segment 2 (negative)  Gradient of a line segment 3 (fractions)  Gradient of a line segment 4 (summary)  Straight line graphs 1  Straight line graphs 2  Straight line graphs 3	Setup & solve equations (in context)	188			
Simultaneous equations (in context)  Linear sequences and graphs  Midpoint of a line segment  Gradient of a line segment 1  Gradient of a line segment 2 (negative)  Gradient of a line segment 3 (fractions)  Gradient of a line segment 4 (summary)  Straight line graphs 1  Straight line graphs 2  Straight line graphs 3	Simultaneous equations by elimination 4	193			
Linear sequences and graphs  Midpoint of a line segment 200  Gradient of a line segment 1 201  Gradient of a line segment 2 (negative) 202  Gradient of a line segment 3 (fractions) 203  Gradient of a line segment 4 (summary) 204  Straight line graphs 1 206  Straight line graphs 2 207  Straight line graphs 3 208	Simultaneous equations by substitution	194			
Midpoint of a line segment 200 Gradient of a line segment 1 201 Gradient of a line segment 2 (negative) 202 Gradient of a line segment 3 (fractions) 203 Gradient of a line segment 4 (summary) 204 Straight line graphs 1 206 Straight line graphs 2 207 Straight line graphs 3 208	Simultaneous equations (in context)	195			
Gradient of a line segment 1         201           Gradient of a line segment 2 (negative)         202           Gradient of a line segment 3 (fractions)         203           Gradient of a line segment 4 (summary)         204           Straight line graphs 1         206           Straight line graphs 2         207           Straight line graphs 3         208	Linear sequences and graphs				
Gradient of a line segment 2 (negative)         202           Gradient of a line segment 3 (fractions)         203           Gradient of a line segment 4 (summary)         204           Straight line graphs 1         206           Straight line graphs 2         207           Straight line graphs 3         208	Midpoint of a line segment	200			
Gradient of a line segment 3 (fractions)  Gradient of a line segment 4 (summary)  Straight line graphs 1  Straight line graphs 2  Straight line graphs 3	Gradient of a line segment 1	<u>201</u>			
Gradient of a line segment 4 (summary)         204           Straight line graphs 1         206           Straight line graphs 2         207           Straight line graphs 3         208	Gradient of a line segment 2 (negative)	<u>202</u>			
Straight line graphs 1         206           Straight line graphs 2         207           Straight line graphs 3         208	Gradient of a line segment 3 (fractions)	<u>203</u>			
Straight line graphs 2 207 Straight line graphs 3 208	Gradient of a line segment 4 (summary)	<u>204</u>			
Straight line graphs 3 208	Straight line graphs 1	<u>206</u>			
	Straight line graphs 2	<u>207</u>			
Straight line graphs 4	Straight line graphs 3	<u>208</u>			
Scraight inte graphs 7	Straight line graphs 4	209			



# Algebra (continued)

Topics	Clip Number	R	Α	G
Linear sequences and graphs (continue	ed)			
Straight line graphs 5	210			
Straight line graphs 6	211			
Straight line graphs 7	212			
Straight line graphs 8	<u>213</u>			
Straight line graphs (parallel)	<u>214</u>			
Straight line graphs (perpendicular) 1	<u>215</u>			
Straight line graphs (perpendicular) 2	<u>216</u>			
Straight line graphs (alternative way to define)	220			
Solving equations & straight lines	<u>217</u>			
Solving simultaneous equations using straight lines 1	218			-
Solving simultaneous equations using straight lines 2	<u>219</u>			
Quadratics	T			
Factorise quadratic expressions 1	<u>223</u>			
Factorise quadratic expressions 2	<u>224</u>			
Factorise quadratic expressions 3	<u>225</u>			
Factorise quadratic expressions 4	<u>226</u>			
Factorise quadratic expressions 5	227			
Factorise quadratic expressions 6	228			
Simplify algebraic fractions (involving quadratics)	229			
Completing the square 1	235			
	236			
Completing the square 2	237			
Completing the square 3				
Using the discriminant	243			
Solving quadratic equations 1 (by factorising)	<u>230</u>			
Solving quadratic equations 2 (by factorising)	<u>231</u>			
Solving quadratic equations 3 (by factorising)	<u>232</u>			
Solving quadratic equations 4 (by factorising)	<u>233</u>			
Solving quadratic equations 5 (inverse operations)	<u>234</u>			
Solving by completing the square 1	<u>238</u>			
Solving by completing the square 2	239			
Solving using the quadratic formula 1	241			
Solving using the quadratic formula 2	242			
Quadratic equations from algebraic fractions	244			
Quadratic equations in context	245			
	246			
Simultaneous equations involving quadratics	252			
Find the y-intercept of a quadratic graph				
Find the x-intercept (roots) of a quadratic graph	<u>253</u>			<u> </u>
Find the line of symmetry of a quadratic graph	<u>254</u>			
Find the turning point of quadratic graphs 1	<u>255</u>	_		
Find the turning point of quadratic graphs 2	<u>256</u>			
Sketch a fully labelled quadratic graph	<u>257</u>			
The discriminant & quadratic graphs	<u>258</u>			
Simultaneous equations using graphs	259			
(quadratic & linear)	233			
Using a quadratic graph to solve a related quadratic equation	<u>260</u>			



## Algebra (continued)

Topics	Clip Number	R	Α	G
Exponentials				
Manipulating powers 1	790			
Manipulating powers 2	791			
Manipulating powers 3	792			
Manipulating powers 4	793			
Manipulating powers 5	794			
Manipulating powers 6	795			
Exponential equations 1	796			
Exponential equations 2	797			
Exponential equations 3	798			
Harder exponential problems	799			
Exponential graphs (drawing)	302			
Exponential growth graphs	800			
Exponential decay graphs	801			
Points on exponential graphs 1	802			
Points on exponential graphs 2	803			
Real life exponential growth 1	804			
Real life exponential growth 2	805			
Real life exponential growth 3	806			
Real life exponential growth 4	807			
Real life exponential decay 1	808			
Real life exponential decay 2	809			
Real life exponential decay 3	810			
Real life exponential decay 4	811			
Circles				
Equation of a circle – centre origin 1	778			
Equation of a circle – centre origin 1	779			
Equation of a circle 1 (find centre and radius)	314			
Equation of a circle 2 (write equation)	315			
Equation of a circle 3 (location of points)	316			
Equation of a circle 4 (not standard form)	317			
Inequalities				
Integer solutions to inequalities	<u>267</u>			
Multiple inequalities on a number line	<u>268</u>			
Solve single linear inequalities 1 (positive x)	<u>269</u>			
Solve single linear inequalities 2 (negative x)	<u>270</u>			
Solve single linear inequalities 3 (difficult)	<u>271</u>			
Linear inequalities as graph regions 1	<u>273</u>			
Linear inequalities as graph regions 2	<u>274</u>			
Linear inequalities as graph regions 3	<u>275</u>			
Linear inequalities as graph regions 4	<u>276</u>			
Solving quadratic inequalities	<u>277</u>			





# Algebra (continued)

	all at 1		_	
Topics	Clip Number	R	Α	G
Formulae				
Change the subject of the formula 1 (1 step)	<u>280</u>			
Change the subject of the formula 2 (2 step)	<u>281</u>			
Change the subject of the formula 3 (negative x)	<u>282</u>			
Change the subject of the formula 4 (x on denominator)	<u>283</u>			
Change the subject of the formula 5 (x with powers)	<u>284</u>			
Change the subject of the formula 6 (x on both sides)	<u>285</u>			
Change the subject of the formula 7 (x on both sides/denominator)	286			
Important graphs				
Cubic graphs (recognising)	<u>299</u>			
Reciprocal graphs 1	300			
Reciprocal graphs 2	<u>301</u>			
Sine graph	<u>303</u>			
Cosine graph	<u>304</u>			
Tangent graph	<u>305</u>			
Sine, cosine, tangent summary	<u>306</u>			
Graph transformations				
Graph transformations 1 f(x)±a	<u>307</u>			
Graph transformations 2 f(x±a)	308			
Graph transformations 3 af(x)	<u>309</u>			
Graph transformations 4 f(ax)	<u>310</u>			
Graph transformations 5 f(x)	<u>311</u>			
Graph transformations 6 f(x)	<u>312</u>			
Graph transformations 7 (combined)	<u>313</u>			

# **Geometry and measures**

Topics	Clip Number	R	Α	G
Non-calculator trigonometry 1	845			
Non-calculator trigonometry 2	846			
Non-calculator trigonometry 3	847			
Non-calculator trigonometry 4	848			
Non-calculator trigonometry 5	849			
Non-calculator trigonometry 6	850			
Non-calculator trigonometry 7	851			
Non-calculator trigonometry (Problem solving 1)	852			
Non-calculator trigonometry (Problem solving 2)	853			