1 Binary to Decimal Decimal to Binary index laws for positive powers Index notation for zero, positive and negative powers. Index laws in algebra calculate using standard form. Use surds and n in exact calculations Rational and irrational numbers. Change recurring decimal to fraction. Surds and rationalise the denominator index laws for integer, fractional and negative powers 2 nth term linear sequence nth term non-linear sequences Surds and rationalise the denominator index laws for integer, fractional and negative powers 3 Direct proportion including graphical and algebraic Inverse proportion including graphical and algebraic 5 Sine and cosine rules angles of polygons Sine and cosine rules A = $\frac{1}{2} ab \sin C$ Pyth and trig. 2D and 3D problems 6 Reflection in lines parallel to area Congruent Combined transformations Reflections in y=ix Flarge Whole number Scale factor and how this effects solume Lengths, areas and volumes of similar stapes Use the relationship between the ratios of lengths, and areas of similar 3-D shapes 8 Constructions and Loci Use the relationship between the ratios of lengths and areas of similar 3-D shapes Simultaneous equations, aligner to a circle 9 Constructions and Loci Use there attainship between the ratios of lengths, and and similar 3-D shapes Imagent to a circle 11 Solve two linear sim egs graphically Set up 8 solve two linear sim egs graphically Sinil and incorunet and no diverse set eigeb	Topic	M6 =C*C	M7 =B	M8 =A*A
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functions, simple cubic functions, the y = - of exponential functions $y - k$ for positive values of k e.g. growth and decay rates	1		of linear functions, guadratic	$v = b^{x}$
y = - positive values of k e.g. growth and decay rates			functions, simple cubic functions, the	of exponential functions $y = \pi$ for
y = - uecay rates			^a	positive values of K e.g. growth and
reciprocal function X with $X \neq 0$ Set up solve and interpret the answers			y = - reciprocal function $x \neq 0$	Set up solve and interpret the answers
in growth and decay problems, e.g. use				in growth and decay problems, e.g. use
the formula for compound interest				the formula for compound interest