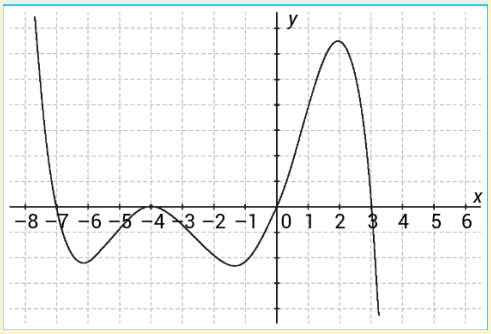
Assess your learning - Algebra 1

Where is your learning at? **Be Honest!**	red	orange	green	Revised for 10 Week Exam	Revised for Summer exam
Can you answer the following questions?					
I can evaluate expressions by subbing in values for the variables. E.g. Evaluate $a^2 - c^2$ if $a = 3$ and $c = 5$					
I can simplify expressions by adding/subtracting like terms together E.g. i) $3a^2 + 2a + 4a^2 - 6a$ $= 7a^2 - 4a$ ii) $2xy + 3yx - 2x^2y + 5y^2x$ $= 5xy - 2x^2y + 5y^2x$					
I can simplify expressions by multiplying expressions together. E.g. i) $(3x)(-4y)$ $= -12xy$ ii) $2x^2(x - 3)$ $= 2x^3 - 6x^2$ iii) $(x + 2)(x - 3)$ $= x^2 + 2x - 3x - 6$ $= x^2 - x - 6$					
I can factorise expressions involving (i) HCF (ii) Grouping (iii) Difference of 2 Squares and (iv) Trinomials E.g. Factorse $3ax - 3ay - 4bx + 4by$					
I can factorise expressions involving the sum and difference of 2 cubes. E.g. Factorise $64p^3 - 27r^3$					
I can add/subtract algebraic fractions together. E.g. Simplify $\frac{2}{2x-1} - \frac{3}{3x+4}$					
I can multiply/divide algebraic expressions. E.g. Simplify $\frac{5x^2-45}{3x^2-7x+4} \times \frac{8x(3x-4)}{2x^2-6x}$ or $\frac{3x-2}{x^2+5x+6} \div \frac{3x^2-2x}{x(x+2)}$					
I can divide algebraic expressions using long division. E.g. Simplify $\frac{6x^3-17x^2+22x-15}{2x-3}$					
I can factorise a cubic expression fully when given one factor. E.g. Factorise $6x^3 - 17x^2 + 22x - 15$ if $2x - 3$ is a factor and find the other two factors.					

Assess your learning - Algebra 2

Where is your learning at? **Be Honest!**	red	orange	green	Revised for 10 Week Exam	Revised for Summer exam
Can you answer the following questions?					
I can solve Linear Equations by i) Trial & Error, ii) Graphing and iii) Algebra E.g. Solve the equation $4x + 5 = 11$ using all 3 methods					
I can solve simultaneous equations with 2 unknowns by i) Graphing and ii) Algebra E.g. Solve the equations below $2x + 3y = 10$ $3x + 4y = 17$					
I can solve simultaneous equations with 3 unknowns. E.g. $x + y + z = 9$ $2x + 3y + z = 16$ $3x - 4y + 2z = 1$					
I can solve quadratic equations by factorising by i) Graphing, ii) Factorising or iii) "-b Formula" E.g. Solve $3x^2 - 4x + 5 = 0$ using all 3 methods					
I can form a quadratic equation when given the roots. E.g. Form the quadratic equation with roots 3 and $\frac{1}{2}$					
I can solve simultaneous equations with 2 unknowns, where 1 equation is linear and the other is quadratic. E.g. Solve the equations $x - y = 2$ and $2x^2 + y^2 = 36$					
I can use the factor theorem to solve cubic equations. E.g. Solve $x^3 - 2x^2 - 5x + 6 = 0$					
I can write down a possible polynomial for a particular graph E.g. Write down a polynomial for the graph below: 					
I can sketch polynomials when given the roots or the factors. E.g. Sketch the graph of the polynomial: $(x + 2)(x - 1)^2(x + 3)$					

I can use the Factor Theorem to find missing variables in cubic polynomials E.g. If $f(x) = px^3 - qx^2 - 36x + 18$, $f(-3) = 0$ and $f\left(\frac{1}{2}\right) = 0$, find the values of p and q.					
I can manipulate formulae to make one variable the subject of the formula. E.g. Given that $p = \sqrt{\frac{a}{1-b}}$, write b in terms of a and p.					
I can find unknown coefficients in an expression by equating the coefficients on both sides of an identity. E.g. If $(x + p)^2 = x^2 - 6x + q$, find the values of p and q.					
I can find unknown coefficients in an expression, when given a factor of it. E.g. If $x^2 + px + r$ is a factor of $x^3 + 2px^2 + 9x + 2r$, find p and r.					

Assess your learning - Algebra 3

Where is your learning at? **Be Honest!**	red	orange	green	Revised for 10 Week	Revised for Summer
Can you answer the following questions?					
I can define the term Surd and give examples.					
I can solve equations with one surd. E.g. Solve the equation $\sqrt{2x+3}=3$					
I can solve equations with more than one surd. E.g. Solve the equation $\sqrt{x+7}+\sqrt{x+2}=5$					
I can solve linear inequalities and show my solution on a number line. E.g. $3(2x-5)\leq 2(x+4), x\in Z$					
I can solve quadratic inequalities. E.g. Solve the inequality $2x^2+15x-8\leq 0, x\in R.$					
I can solve rational inequalities. E.g. Solve the inequality $\frac{2x+4}{x+1}<3, x\in R$					
I can solve equations with a modulus using algebra. E.g. Solve the equation $\|2x-5\|=7.$					
I can solve inequalities with a modulus using algebra. E.g. Solve the inequality $\|x-4\|\geq 3, x\in R.$					
I can prove inequality identities. E.g. Prove that $a^2-10a+25+4b^2\geq 0$ for all a, b $\in R$					
I can use the discriminant to find missing variables in quadratic equations. E.g. Find the value of p in the equation $x^2+10x+p=0$, if it has two equal roots.					