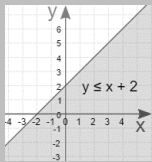
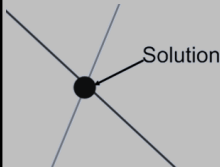
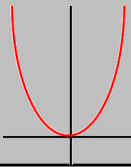
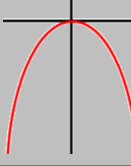
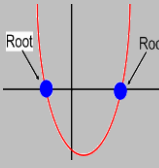
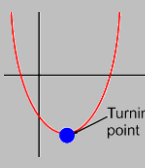
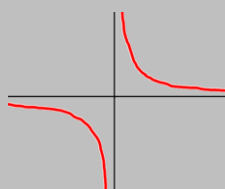
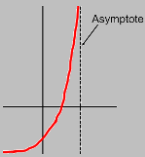


INEQUALITIES		
inequality	where two expressions are not equal in value	
inequality symbols	< less than	> greater than
	≤ less than or equal to	≥ greater then or equal to
plotting inequalities	create a table of values and substitute in values of 'x' (like with linear graphs) < or > means a dashed line ≤ or ≥ means a solid line	
inequality regions	for greater than symbols, shade above the line	
	for less than symbols, shade below the line	
simultaneous inequalities (graphically)	regions can be shaded that satisfy inequalities : strict (< or >) are a dashed line ----- non-strict (≤ or ≥) are a solid line _____ 	

SIMULTANEOUS EQUATIONS		
simultaneous	occurring at the same time	
simultaneous equations	equations with the same variables whose solutions hold the same value must be solved at the same time to find the values of 'x' and 'y'	
solving	add or subtract the equations to eliminate one variable , then solve as a linear equation variables must have the same coefficient to be eliminated when one variable is known, substitute into one of the equations and solve to find the value of the other variable	
	for the variable being eliminated with... the same sign , subtract the equations different signs , add the equations	
same coefficients of variables	when simultaneous equations have variables with the same coefficients , decide whether to add or subtract straight away	
different coefficients of variables	when simultaneous equations have variables with different coefficients , find the LCM and scale up (multiply) the equations until they have the same coefficient, then add or subtract	
solve by substitution	make one variable the subject of one of the equations and substitute into the other to eliminate it, then solve as with linear	
simultaneous equations (graphically)	can be solved graphically by plotting the two lines and finding the coordinate where they cross	

Year 9 Unit 4: Algebraic Graphs

QUADRATIC GRAPHS		
quadratic graph	a graph where the highest power of x is x² general format ax² + bx + c it is always a parabola (a U-shape) in the general format, ' c ' is where the graph crosses the y-axis	
	$y = x^2$	
	$y = -(x^2)$	
roots (of graphs)	the ' solutions ' of a graph, where a function equals zero can be found in a graph where the curve meets the x axis	
turning point	the point where a graph turns , from negative to positive gradient or positive to negative gradient	

OTHER NON-LINEAR GRAPHS		
cubic graph	a graph where the highest power of x is x³ general format ax³ + bx² + cx + d ' d ' is where the graph crosses the y-axis	
	$y = x^3$	
reciprocal graph	$y = \frac{k}{x}$ the graph has asymptotes on the x-axis and y-axis (as it is impossible to divide by zero)	
asymptote	a straight line a graph approaches but never touches	
exponential graph	$y = k^x$ the graph has an asymptote on the x-axis	