

Activity 12

An example lesson plan

Teacher:	Date:	Lesson:
Subject: A Level Maths	Group:	Class size: 15
Nature of the Group, e.g. overall targets; learners with additional/ special needs/G&T etc. Please reference teaching assistants in the learning activities or add a note here. This is a mixed ability group		Context, e.g. topic; previous and next learning Plotting quadratic graphs Ability to factorise, complete the square and use the formula with quadratic equations
LEARNING OBJECTIVES AND (where possible) LINK TO LEVELS/GRADES What learners will know/understand/be able to do differently from when the lesson started		
Broad Learning Objective to be shared with learners: How to discriminate between different 'types' of quadratic functions		
By the end of the lesson, <u>all</u> learners will (minimum expected of all learners in the group) Substitute values accurately into the discriminant		
By the end of the lesson, <u>most</u> learners will Determine how many solutions are possible		
By the end of the lesson, <u>some</u> learners will (most able/those wishing to push themselves) Be able to interpret the discriminant graphically		
Starter / introduction Discuss in groups what you can tell me about (a) $x^2 + 4x - 12$, (b) $x^2 - 6x - 9$		Assessment Groups feedback, all information collated on board
Main lesson Use Autograph (or other graph software) to plot graphs Repeat this exercise with (c) $x^2 + 4x + 1$ and (d) $x^2 - 6x + 10$ Consider the quadratic formula and what determines the outcome Relate the 3 different possibilities for $b^2 - 4ac$ to the graph and the number of solutions Practice using Oxford Pure Mathematics 1 Ex1.7, q1-5		After 10 mins pick learners to give answers to question 1
Plenary Use 5 different graphs for learners to determine visually the properties of the discriminant and the roots		Pick learners answer
Homework Oxford Pure Mathematics 1 Ex1.7 q6-12 Produce an 'informational' poster/PowerPoint/video to explain the properties of the Discriminant and how to calculate		
Notes e.g. literacy, numeracy aspects of the lesson Further support explanation available at http://www.purplemath.com/modules/quadform3.htm		