



Activity type	classroom <input checked="" type="checkbox"/> homework <input type="checkbox"/> independent learning <input type="checkbox"/> other <input type="checkbox"/>		
Activity objectives(s)	By the end of this lesson students should be able to - draw straight lines given their equation - find the point of intersection of a pair of straight lines		
Activity resources(s)	This lesson is best done with an interactive whiteboard and a set of laptops or in a computer suite.		
Delivery mode	teacher led <input checked="" type="checkbox"/> student led <input type="checkbox"/>	Collaboration type	individual <input checked="" type="checkbox"/> pairs <input checked="" type="checkbox"/> groups <input type="checkbox"/>
Task description	This task lends itself to an investigative approach. Discuss what solving simultaneous equations graphically means. Students should work through Nat 5 Unit 1 Topic 15.2 Equations of the type $x + y = a$ and $x - y = b$ You may wish pupils to copy example 1 as a worked example. Tell students how many times to try exercise 1 with new equations. Equations of the type $x + ky = a$ and $x + y = b$ You may wish pupils to copy example 2 as a worked example. Tell students how many times to try exercise 2 with new equations. Equations of the type $y = ax + b$ and $y = cx + d$ You may wish pupils to copy example 3 as a worked example. Tell students how many times to try exercise 3 with new equations.		



SCHOLAR Lesson Outline

Differentiation (Alternative use)	Students will require prior knowledge of drawing straight lines for this topic. You may wish to use Nat 5 Unit 1 Topic 15.1 Drawing straight lines given their equations.
Hints & Tips	<p>This task is best done individually. If students are working in pairs make sure they take turns and keep an eye open for students off task.</p> <p>Exercises 1 & 3 require students to choose an equation to draw by clicking on the button beside it. When they have plotted two points the computer will automatically draw in the straight line through the points.</p> <p>Exercise 2 displays the line for the first equation and requires students to plot two points for the second simultaneous equation.</p> <p>Drawing straight lines manually tends to be time consuming and the amount of practice that students get using pencil and paper can vary enormously. Using SCHOLAR can speed up the learning process by providing a table for values and the ability to plot points and draw straight lines quickly. Any mistakes will be identified and can be corrected without the need to rub out a diagram or start all over again.</p> <p>Have some questions ready on the board or from the textbook to end the lesson or for students who have completed the online tasks quickly.</p> <p>Some students may need help finding the coordinates of points from an equation. This could be a lesson starter.</p>
Notes	<p>Even the most able students would benefit from revising drawing straight lines from their equations as prior knowledge.</p> <p>This lesson may take a whole period on SCHOLAR so a textbook homework exercise would help to consolidate learning.</p> <p>The formative assessment exercises in this task would allow this topic to be covered in one lesson plus a homework task.</p>