

GRAPHICAL TRIANGLE

What is the area, (in square units) of the triangle formed by the three lines whose equations are:
 $y - x = 6$,
 $x - 2y = 3$ and
 $x + y = 6$?

METHOD 1

Plot the graphs.
 Find the coordinates of the vertices of the triangle.
 Box in the triangle.
 Calculate the areas of all the triangles in the box.

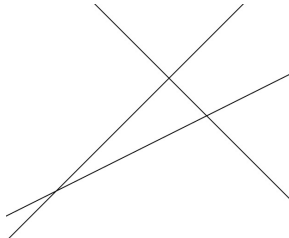
METHOD 2

Plot the graphs.
 Find the coordinates of the vertices of the triangle.
 Explain how you know the triangle is right angled.
 Calculate the lengths of 2 edges of the triangle.


Help

Use axes with x from -20 to $+10$ and y from -15 to $+15$ and to plot the lines:
 $y - x = 6$, $x - 2y = 3$ and $x + y = 6$?

The three lines will look like this.



Imagine a box in the diagram going through the 3 vertices.
 Use the box to find the area of the triangle made by the 3 lines.



Write out a 'to do' list that you could follow step by step to find the area of the triangle.

Extension

Find the area by a different method.

Odd one out <https://aiminghigh.aimssec.ac.za/years-7-to-9-odd-one-out/>

