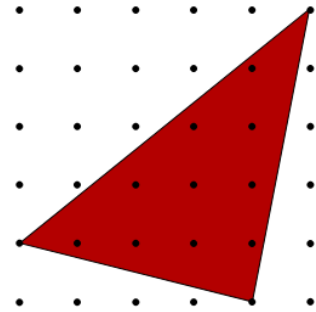
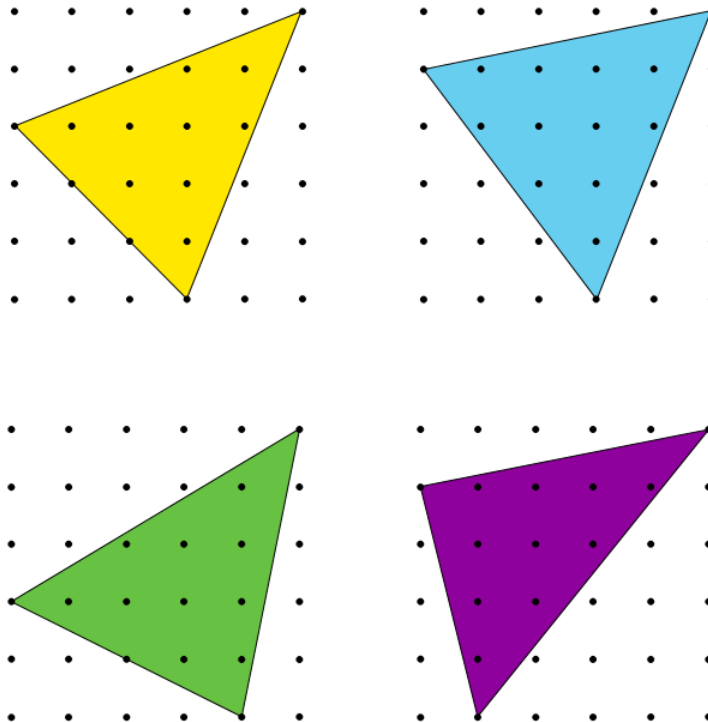


Here is a triangle drawn on a 5 by 5 dotted grid by joining the top-right-hand dot to a dot on the left hand side of the grid, and a dot on the bottom of the grid:



Here are some more triangles drawn in the same way. Which has the largest area?



Now, think about the different triangles that can be formed with a vertex at $(5, 5)$, a vertex on the left hand side and a vertex on the bottom of the grid.

What is the smallest area such a triangle can have? What about the largest area? Which areas in between is it possible to make? How many of these areas are whole numbers?

Can you find a general expression for the area of a triangle on this grid if its vertices have co-ordinates $(5, 5)$, $(x, 0)$ and $(0, y)$?

What can you say about the areas of triangles drawn on a 6 by 6 grid? Or a 7 by 7 grid? Or a 100 by 100 grid...?