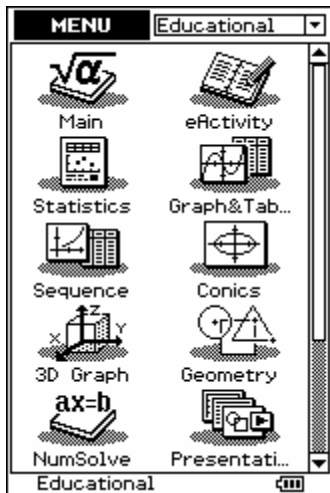


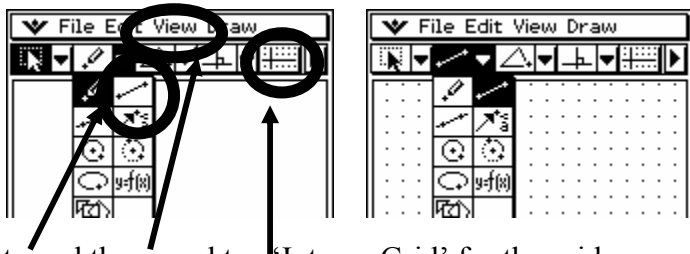
# Geometry

Drawing closed figures with straight edges and discovering Pick's Rule.

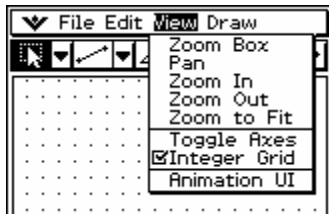


Enter into the **Geometry** icon.

Tap on the second picture to open the drawing tools.

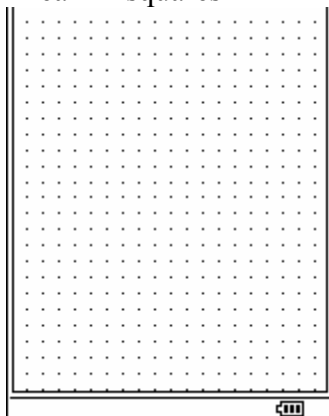


Select **Integer Grid** for the grid, you may need to tap here to remove the x and y axes and axis numbering.

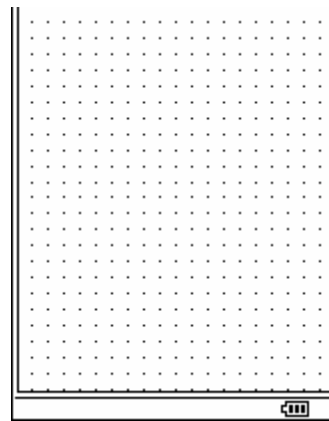


Generate closed figures with straight sides (edges) that have an area of

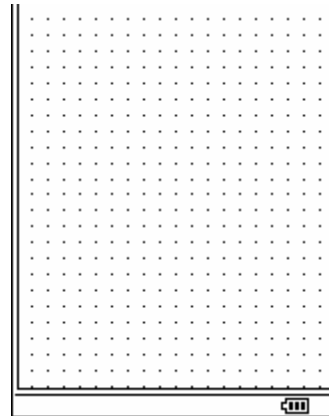
- 4 squares
- 5 squares
- 6 squares
- 7 squares and
- 8 squares. Copy the figures that you have drawn on the ClassPad 300 and draw these in the grids provided below:
- Area = 4 squares



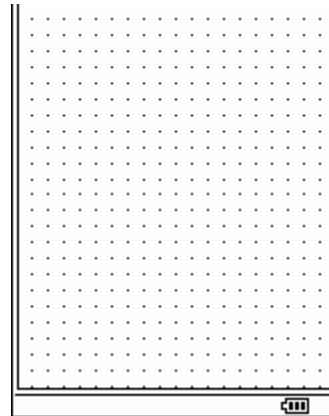
- Area = 5 squares



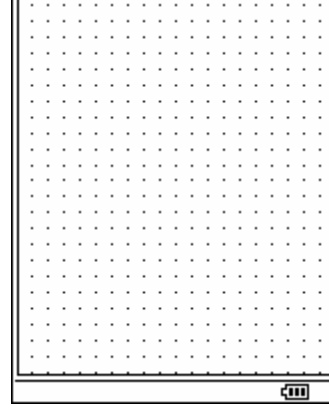
- Area = 6 squares



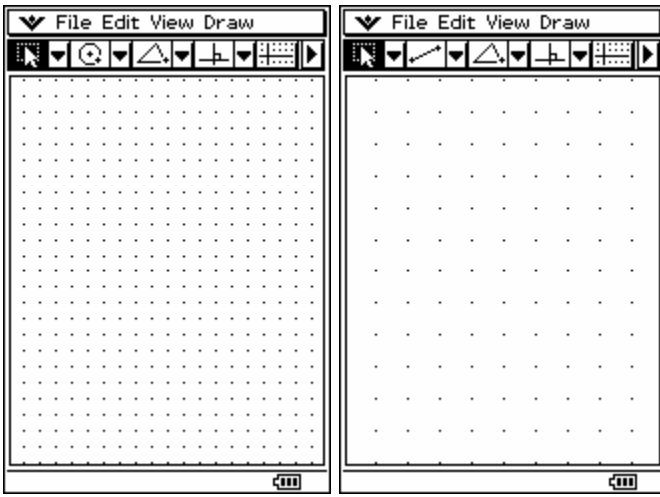
- Area = 7 squares



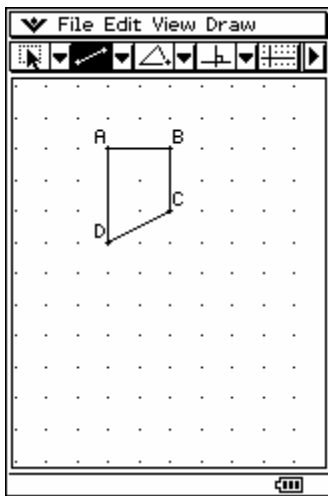
- Area = 8 squares



Example: From a blank grid.

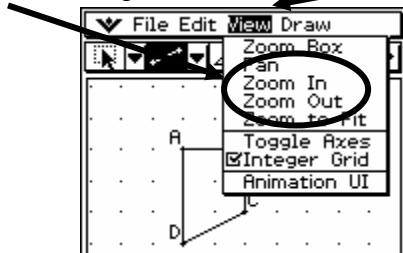


Generate a closed figure by tapping on a grid point and then tapping again at another, continuing until you have a closed figure enclosing the required area.

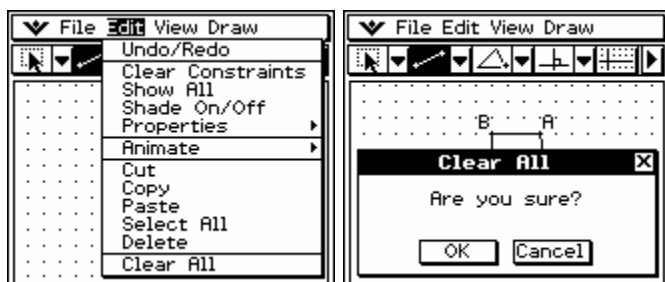


The example above has an area of 5 units.

To Zoom in or Zoom out, you can alter the viewing size to suit the figures that you are drawing. Tap on **View** and alter as required.



To clear all of your 'creations', go to **Edit** and select **Clear All** then tap on **OK**. See below:



Here are some 5 square unit areas

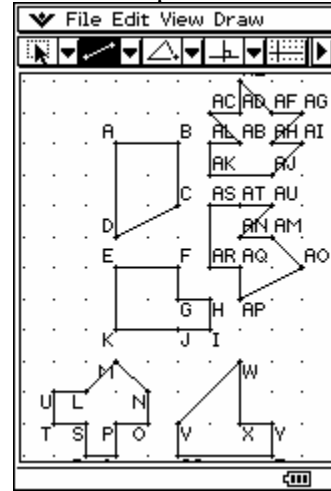


Table of results:

• Area = 4 squares

Number of dots on the perimeter.									
Number of dots on the inside.									

• Area = 5 squares

Number of dots on the perimeter.									
Number of dots on the inside.									

• Area = 6 squares

Number of dots on the perimeter.									
Number of dots on the inside.									

• Area = 7 squares

Number of dots on the perimeter.									
Number of dots on the inside.									

• Area = 8 squares

Number of dots on the perimeter.									
Number of dots on the inside.									

### Investigation:

What could be a rule for each of the area figures that links the 'Number of dots on the perimeter' with the 'Number of dots on the inside'? Can you generalise for all closed figures of varying sizes in area.