# AREA in Coordinate Geometry

This activity has the students use a LearnCheck document to do the entire activity. The students will explore the procedure to finding the area of a shaded region in coordinate geometry via the steps they will take in their LearnCheck file.

Before Activity:

Have students login to navigator.
Send students a picture of a shaded region problem that was drawn in the TI-84 or via CabriJr. 2.0. Save as pic 1. Send students pic1 and GDB.
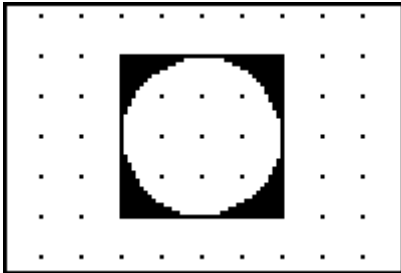
Have students exit Navigator and press DRAW and arrow to places to the right 3: Recall Pic1

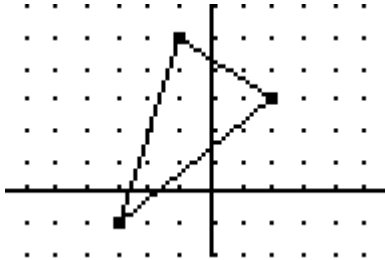Instruct students to copy pic into their notebook, preferably on graph paper.
   (1) Find the area of the square.
   (2) Find the area of the circle
   (3) Find the difference in the two areas.

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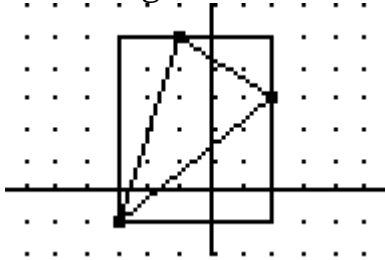
Log Back into Navigator when done.

Send students "area of triangle.edc"
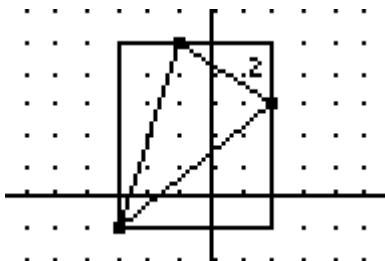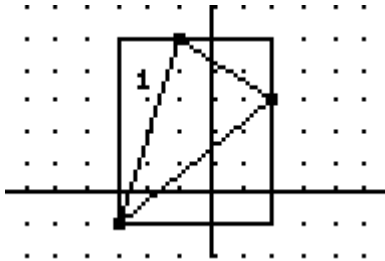The students will be instructed to find the area of the figure:

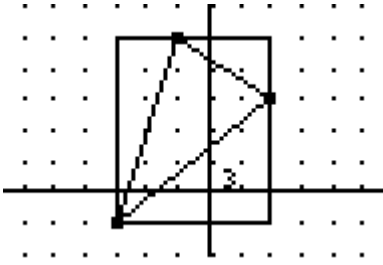They first are asked to estimate the area of their triangle by counting boxes.

They are then asked to find the area of the rectangle that circumscribes the triangle as seen in the image:
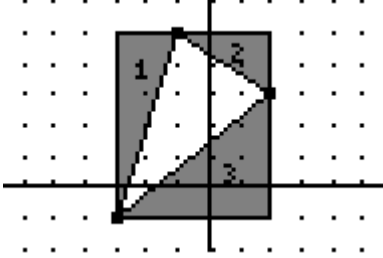
The triangles are then going to be numbered and the students are to find the areas of each.

They are then instructed to find the sum of triangles 1,2, and 3.
Using that information they are to find the area of the shaded region.

They must also determine their percentage error based on their original estimate.

Open with Class Analysis.
Review procedure with students.
Then the students must write down the steps, in their own words to the procedure performed.

After the activity:
The students are to find areas of triangles given in another Learncheck document "area practice.edc" which may be sent via Quick poll or a LearnCheck.
1) Find the area of triangle RST whose vertices are R(5,4), S(2,1), and T(6,5).

2) Graph rectangle ABCD and find its area. A(-9,3), B(-9,4), C(-5,-4), D(-5, 3)

3) The vertices of quadrilateral PLUM are P(4,1), L(2,3), U(5,1), and M(4,2). Find the area of quadrilateral PLUM.

4) Graph ABCD and find its area: A(-2,-1), B(1,3), C(5,0), D(2,-4)

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Area of Triangles	Question 1	Question 2	Question 3	Question 4	Question 5
Diagram					
Work					
What did you do?					