Put all answers on the colored answer sheet. All fraction answers must be reduced. You should leave appropriate answers in terms of π.
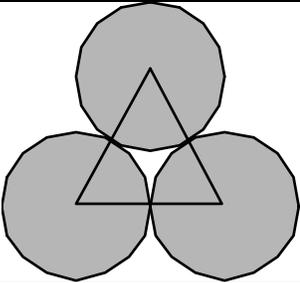
Problems 1 through 5 are worth 2 points each	
1	In a 10cm by 10cm, 5x5 checkerboard of alternating red and black squares, (with red on the corners,) what is the total area of the red squares (in centimeters)?
2	If a right triangle has legs of length 9 and 12, what is the length of the hypotenuse?
3	How many lines of symmetry does a hexagon have?
4	What is the largest area, in meters, you can encompass with just 20 meters of fencing?
5	How many times can 8 lines intersect each other on a single plane?
Problems 6 through 10 are worth 3 points each	
6	Two sides of a triangle are 6 and 10 units long. What is the sum of all possible whole number side lengths the third side could be?
7	In the figure at left, assuming the triangle is equilateral with a perimeter of 24 and the centers of the circles are on the triangle's vertices, what is the area of the shaded region?
8	What is the next number in the following geometric sequence: 27, 18, 12, 8…?
9	Mak^{II} has 90 Xboxes. If he wants to arrange them in 2 equally sized triangles like the one shown below, how many rows will be in each triangle? [X] [X] [X] [X] [X] [X] [X] [X] [X] [X]
10	Master Chief runs 6 miles south, 5 miles east, 20 miles north, 10 miles west, and then 2 miles south to pick up the Warthog. If the Warthog can go 52 miles per hour, how long (in minutes) will it take Master Chief to go straight back to his original location?