Name: _____ Geometry
Date: _____ Review
Class: _____ Graded Homework 30

Show all of your work for every problem. The numbers in the brackets are the points that each problem is worth. Multiple Choice Problems are worth 3.
NO WORK = ZERO CREDIT

1) [3] A circle has an area of $49cm^2$. A square is drawn that is inscribed in this circle. Find the area outside the square but inside the circle to the nearest hundredth.

2) [3] Find the area of a circle in terms of π that is represented by the following equation: $y^2 - 5x + x^2 + 7y - 8 = 0$.

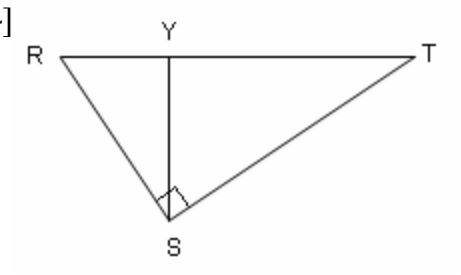
3) [4] Water weighs 62.4 pounds per cubic foot. Which would weigh more if it was full of water? A sphere with diameter 9.1ft or a cone with diameter 14.5ft (the cone has a congruent height and radius)?

4) [3] A triangle has the points A(-8, 4), B(10, 7), and C(2, -9). This triangle was found using a dilation (centered at the origin) that made the area of this new triangle 4 times the original triangle. Find the points of the original triangle.

5) [4] 

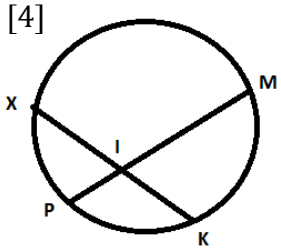
Construct an isosceles triangle with a 30 degree vertex angle and AB as the length of a leg. Dilate this triangle so that it has an area 9 times as big as the original triangle you drew. (Using A as the vertex angle works better)

6) [4]



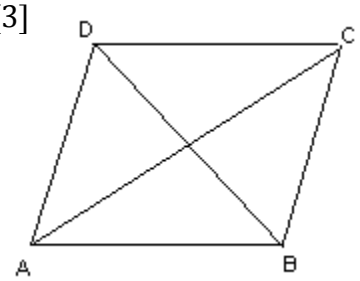
RS:ST:RT = 5:12:13. The area of △RST is 750. Find SY to the nearest tenth.

7) [4]



$m\widehat{XM} = 8x - 2, m\widehat{PK} = 2x + 12, m < XIM = 4x + 24$
If the radius of this circle is 10in, find the length of arc PK to the nearest tenth of an inch.

8) [3]



(the point where segment DB and segment AC cross is point E). DCBA is a parallelogram.
m<DCB = 6x +7, m<BCE = 4x – 8,
m<ADE = 6x – 5, and m<CEB = 8x – 29.
Is ABCD a rhombus? Explain your answer.

9) [6] Quadrilateral ABCD has points A(-3, 6), B(2, 0), C(-1, -5), and D(-6, 1). Prove that ABCD is a parallelogram. Which point could your remove to leave an acute triangle? Explain your answer.