Name: _____ Geometry
Date: _____ Review
Class: _____ Graded Homework 35

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] In a right triangle, <C is the right angle. The sides are in the ratio 5:12:13. Which of the following is not true (there should be only 1 right answer, not 3 – your triangle should be set up in a manner that yields 1 right answer)?

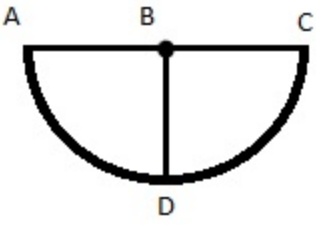
1) $sinA = \frac{5}{13}$ 2) $tanB = \frac{12}{5}$
3) $cosB = \frac{12}{13}$ 4) $tanA = \frac{5}{12}$

2) [4] If you were going to construct a regular 19 sided polygon inscribed in a circle and also construct a 15 sided regular polygon inscribed in a different circle, what would be the difference in the measures of the arcs that you would need to create these two figures?

3) [3] If a segment has endpoints S(-8, -4) and F(8, 28), find a point between them (Y) that creates the following ratio – FY:SY = 1:3.

4) [6] You are filling a swimming pool that has the following shape. Part of it is a prism that has a width of 10ft, height of 10ft, and length of 20ft. The other part is a portion of a sphere with the same width and height at the spot where they fit together. If the pool is filled up to 80% full, how much would the water weight (water weighs 62.4 pounds per cubic foot? If water costs $0.0045 per gallon, how much would it cost to put this amount of water into the pool (there is approximately 7.48 gallons per cubic foot).

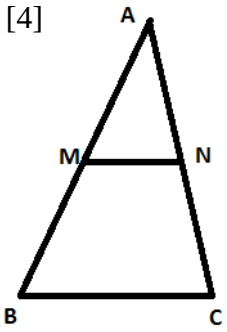
5) [4] Which would have a larger density – 20,000 people in an area that is an isosceles triangle with base = 1000ft and leg = 1500ft or 23,500 people in an area that is a circle with circumference of 1000π?

6) [3] 

If this shape is rotated around BD continually what shape will be created? (BA = BC = BD) Draw a sketch of the shape. ($\overline{BD} \perp \overline{AC}$)

7) [4] Triangle ABC has points A(2, 1), B(10, 3) and C(0, 5). It is dilated using a scale factor of ½ centered at (-2, -1). Find the coordinates of the new triangle.

8) [3] If a segment has endpoints (-5, -7) and (2, 2) find the equation of a line that is perpendicular to this segment and also travels through point (-3, 8).

9) [4] 

In the following picture – m<ANM = m<ABC.
AN = 8, NC = x, AM = 7, and MB = 2x. Find AC