Test 1 MAT 104 Winter 2008 Name _____

Simplify all answers and show your work!

1. There are _____ degrees in a triangle. 2. There are _____ degrees in a circle.

3. There are _____ degrees in a line. 4. A triangle with 3 equal side lengths is called _____.

5. What is the vertex of $\angle HRL$? _____ 6. An angle with a measure of 90^o is a _____ angle.

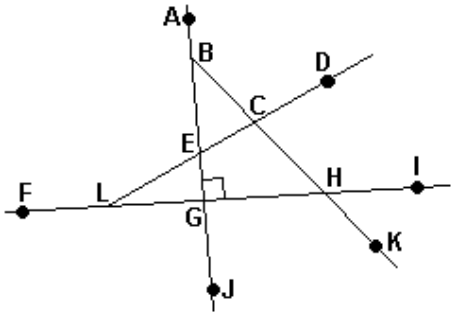
7. Two lines in a plane that do not cross are called _____ lines.

8. Perpendicular lines cross in a _____ degree angle.

9. Write in scientific notation: 256,000,000,000 10. Write in engineering notation: 0.0000000092

11. Write using the correct metric prefix: 38,000,000,000 meters 12. 5.1 mL = _____ L 13. 8.97 m = _____ cm

Refer to the figure below for problems 14 – 19.



14. Name an acute angle. _____ 15. Name an obtuse angle. _____

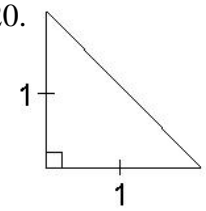
16. Name a right triangle. _____ 17. What is the measure of angle HGJ?

If the measure of angle BHG is 48^o:

18. find the measure of angle BHI. 19. find the measure of angle HBG.

Classify the following triangles as a) acute, right, or obtuse and b) scalene, isosceles, or equilateral.

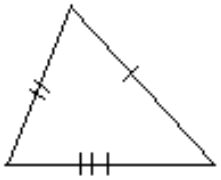
20.



a) _____

b) _____

21.



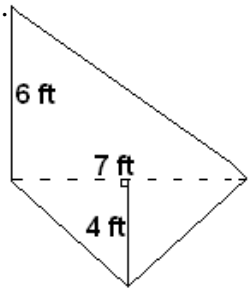
a) _____

b) _____

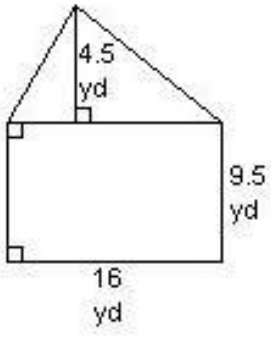
22. Draw an example of two figures that have the same perimeter but different areas.

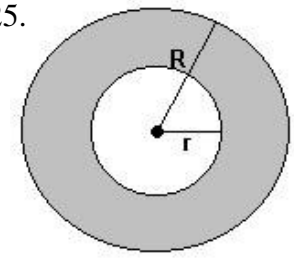
Find the areas of the figures below:

23.



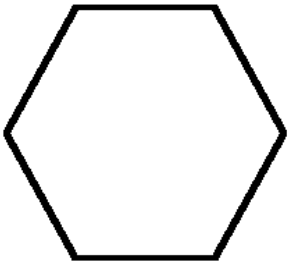
24.



25. 

Find the cost to asphalt a circular racetrack if asphalt costs \$80 per 100 ft^2 where the outer radius (R) is 150 feet and the inner radius (r) is 90 feet.

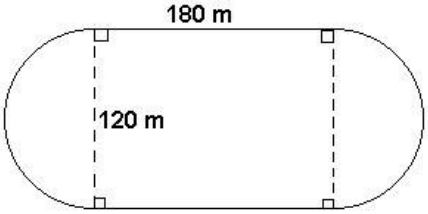
26. The figure below is a regular hexagon.



a) Find the sum of the interior angles.

b) Find the measure of one interior angle.

27. Find the perimeter of the figure below.



28. A one-story building is 210 ft by 160 ft. If a square patio with sides 25 ft occupies the center of the building, how much area remains for offices?

29. The shape of a patio is trapezoidal with a height of 9 ft and bases of 19 ft and 13 ft. What is the cost of outdoor carpeting to cover the patio if the carpeting costs \$6.50 per ft^2?

30. A room measures 14 ft by 30 ft and the ceiling is 12 ft above the floor. There is one door, which is 3 ft by 7 ft. A gallon of paint will cover 150 ft^2. How many gallons of paint are needed to paint the room (including the ceiling and not including the door). Round you answer up to the next whole number.