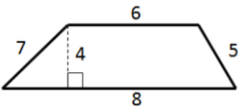
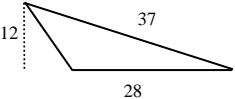


First name: _____ Last name: _____

Student ID: _____

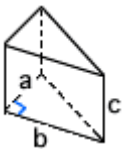
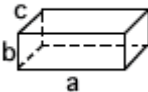
Geometry 2 Homework**Basic problems****1. Find the area of the following shapes.**

1. A circle with a diameter of 36 cm.	2. 	3. 
---------------------------------------	--------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------

2. Draw an example for each of the concepts.

1. Adjacent angles	2. Vertical angles	3. Complementary angles
4. Alternative interior angles	5. Alternative exterior angles	6. Corresponding angles
7. Co-interior angles	8. Supplementary angles	9. Perpendicular lines

3. Find the volume of each solid. Show work!

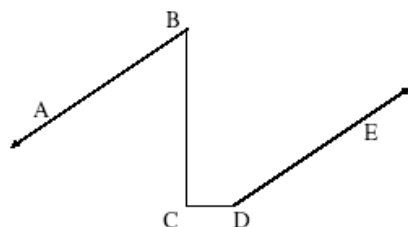
<p>1. A sphere with a radius of 4 dm.</p>	<p>2.  $a = 7.51 \text{ cm}$ $b = 5 \text{ cm}$ $c = 120 \text{ mm}$</p>	<p>3.  $a = 62 \text{ yd}$ $b = 27.4 \text{ yd}$ $c = 19.3 \text{ yd}$</p>
-------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Challenge problems

1. The length of a rectangle is 6 more than twice its width. If the perimeter of the rectangle is 120, what is its width?

2. How many degrees are in an exterior angle of a regular 18-gon?

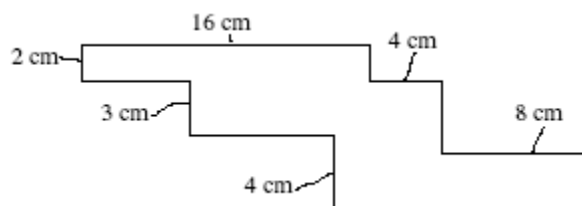
3. In the figure, rays AB and DE are parallel. Angle C is a right angle and angle B measures 52 degrees. Find the measure of angle CDE .



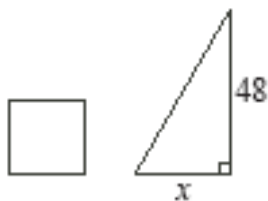
4. A water tank in Tibi's farm is an oval shaped container that is 2.7 feet tall. The area of the bottom of the tank is 14.4 square feet. If the cattle drink two hundred thirty cubic feet of water a day, how many times per day will the tank have to be filled?

5. The length of the sides of a square and the sides of a regular octagon are the same. The area of the square is 196 square centimeters. What is the perimeter of the octagon?

6. Find the perimeter of the figure shown below. You may assume that all the angles that appear to be right angles are right angles.

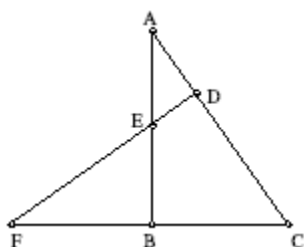


7. In the diagram, the square has a perimeter of 48 and the triangle has a height of 48. If the square and the triangle have the same area, what is the value of x ?

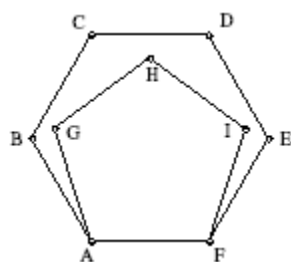


8. A rectangle is one foot longer than it is wide and has a perimeter of 50 feet. How many square feet are in the area of the rectangle?

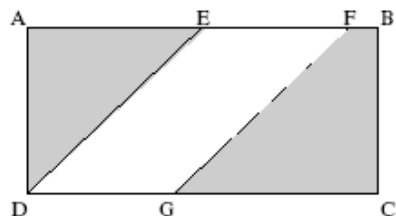
9. In the figure below, angles ABC and ADE are right angles. FED and FBC are straight lines. The measure of angle ACB is 55 degrees. How many degrees are in the measure of angle EFB ?



10. In the figure to the right, regular pentagon $AGHIF$ sits inside regular hexagon $ABCDEF$ so that the two shapes share side AF . What is the measurement of angle GAB ?



11. In the rectangle below, the measure of AB is 24 inches, the measure of AD is 11 inches, and the measure of EF is 10 inches, and $ED \parallel FG$. How many square inches are in the combined area of the shaded regions?



12. A regular octagon and a regular hexagon share a common side. What is the measurement of the exterior angle formed where they meet? *Hint: draw a diagram.*

13. Draw a triangle between a pair of parallel lines and use your knowledge of angles to prove that the sum of angles inside a triangle is 180° .