To receive full credit you will need to write complete, clear, and understandable answers.

Name_____

Do any three of the problems 1 thru 6 and Problem A and B.

1. If two triangles are SSS congruent what does it mean? If two triangles are ASA congruent what does it mean? Explain and give examples. What does it mean to say two triangles are similar? Explain and give examples.

2. You are sitting way in back in your calculus lecture with 600 of your fellow freshman. You hold out your arm and notice that the professor looks to be just as tall as your thumb. The professor turns around and smiles at you because he thinks you are giving him the "thumbs up" sign of approval. If your thumb is 5 centimeters tall, your arm is half of a meter, and the calculus professor is 2 meters tall, how far away is your professor?

3. Jupiter has many moons. Three of them are Europa, Ganymede, and Callisto.

moon	distance from Jupiter in 1000 km	radius in km
Europa	670	1560
Ganymede	1070	2631
Callisto	1882	2410

For an observer on the surface of Jupiter which of the three moons would appear to be largest? Explain.

4. Determine the surface area and the volume of a closed box which is 2 inches wide, 3 inches deep, and 4 inches tall.

5. A house has a floor area of 1600 square feet. What is the floor area in square meters? Use the fact that 1 inch = 2.54 centimeters.

6. One source says that the average distance from the Earth to the Moon is 384,467 kilometers. Another source says that the average distance from the Earth to the Moon is 384,000 kilometers. Can both descriptions be correct, or must at least one of them be wrong? Explain.

Enter which problems 1-6 you did in boxes:

Problem	*Score*
A	
B	
Total	

Do both problems A and B on the back of this page.

Problem A. Draw lines connecting items in the left column with those that match in the right column. (Warning: Items may be connected to more than one thing in the opposite column.)

	1000 millimeters
a baker's foot	100 inches
6 teramiles	9 square feet
1 meter	8 furlongs
2.54 meters	volume of hole which is 2 feet wide, 6 feet long and 6 feet deep
1000 cubic centimeters	
72 cubic feet	13 inches
1 square yard	5280 feet
1 mile	1 light year
	1 liter

Problem B. For each of the the figures below (square, rectangle, rhombus, equilateral triangle) draw all of its lines of reflection symmetry.