Lesson 9 Practice Problems

1. Use a protractor to try to draw each triangle. Which of these three triangles is impossible to draw?

   a. A triangle where one angle measures 20° and another angle measures 45°

   b. A triangle where one angle measures 120° and another angle measures 50°

   c. A triangle where one angle measures 90° and another angle measures 100°

2. A triangle has an angle measuring 90°, an angle measuring 20°, and a side that is 6 units long. The 6-unit side is in between the 90° and 20° angles.

   a. Sketch this triangle and label your sketch with the given measures.

   b. How many unique triangles can you draw like this?

3. a. Find a value for x that makes $-x$ less than $2x$.

   b. Find a value for x that makes $-x$ greater than $2x$.

   (From Unit 5, Lesson 13.)

4. One of the particles in atoms is called an electron. It has a charge of -1. Another particle in atoms is a proton. It has charge of +1.

   The overall charge of an atom is the sum of the charges of the electrons and the protons. Here is a list of common elements.

	charge from electrons	charge from protons	overall charge
carbon	-6	+6	0
aluminum	-10	+13	
phosphide	-18	+15	
iodide	-54	+53	
tin	-50	+50	

   Find the overall charge for the rest of the atoms on the list.

   (From Unit 5, Lesson 3.)

5. A factory produces 3 bottles of sparkling water for every 7 bottles of plain water. If those are the only two products they produce, what percentage of their production is sparkling water? What percentage is plain?

   (From Unit 4, Lesson 3.)