

**Problem Set**

For each of the following problems, write an equation and solve.

1. The measure of one angle is thirteen less than five times the measure of another angle. The sum of the measures of the two angles is  $140^\circ$ . Determine the measure of each angle in degrees.
2. An angle measures seventeen more than three times a number. Its supplement is three more than seven times the number. What is the measure of each angle in degrees?
3. The angles of a triangle are described as follows:  $\angle A$  is the largest angle; its measure is twice the measure of  $\angle B$ . The measure of  $\angle C$  is 2 less than half the measure of  $\angle B$ . Find the measures of the three angles in degrees.
4. A pair of corresponding angles are described as follows: The measure of one angle is five less than seven times a number, and the measure of the other angle is eight more than seven times the number. Are the angles congruent? Why or why not?
5. The measure of one angle is eleven more than four times a number. Another angle is twice the first angle's measure. The sum of the measures of the angles is  $195^\circ$ . What is the measure of each angle in degrees?
6. Three angles are described as follows:  $\angle B$  is half the size of  $\angle A$ . The measure of  $\angle C$  is equal to one less than two times the measure of  $\angle B$ . The sum of  $\angle A$  and  $\angle B$  is  $114^\circ$ . Can the three angles form a triangle? Why or why not?