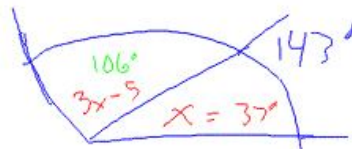


Lesson 5: Writing and Solving Linear Equations

Classwork

Example 1

One angle is five less than three times the measure of another angle. Together they have a sum of 143. What is the measure of each angle?



Let $x =$ another angle

1st $\angle \rightarrow x = 37^\circ$
 2nd $\angle \rightarrow 3x - 5$
 $3(37) - 5$
 $111 - 5 = 106^\circ$

$$(3x - 5) + x = 143$$

$$\begin{array}{r} 4x - 5 = 143 \\ + 5 \\ \hline 4x = 148 \\ \div 4 \\ \hline x = 37 \end{array}$$

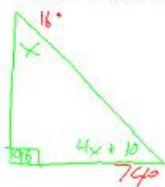
add. prop. of equality

div. prop. of equality

$$\begin{array}{r} 106 \\ + 37 \\ \hline 143 \end{array}$$

Example 2

Given a right triangle, find the measures of the angles if one angle is ten more than four times the other angle, and the third angle is the right angle.



Let $x =$ other angle

1st $\angle \rightarrow x = 16^\circ$
 2nd $\angle \rightarrow 4x + 10$
 $4(16) + 10$
 $64 + 10 = 74^\circ$

$$x + (4x + 10) + 90 = 180$$

$$\begin{array}{r} 5x + 100 = 180 \\ - 100 \\ \hline 5x = 80 \\ \div 5 \\ \hline x = 16 \end{array}$$