Applications and Problem Solving

To solve problems with two or more unknowns:

1. Select a variable to represent one of the unknowns
2. Write expression(s) the other unknown(s) in terms of the variable.
3. Write an equation using the variable and expressions from 1 and 2.
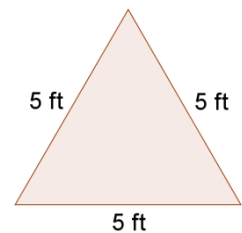4. Solve the equation.

Ex 1.

An LCD monitor is to have a rectangular screen with a width that is 5 inches less than twice the height and a perimeter of 44 inches. What are the dimensions of the screen?
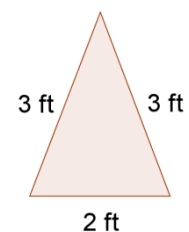
A triangle with all **three** sides of equal length is called an

_____.

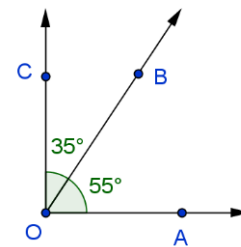A triangle with **two** sides of equal length is called an

_____.

Ex 2.

Suppose each of the equal-length sides of an isosceles triangle is 3 inches more than the base. The perimeter is 30 inches. What are the lengths of the base and the sides of equal length?
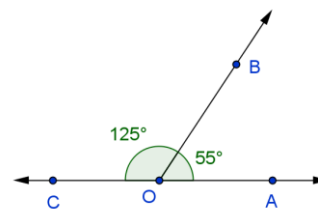
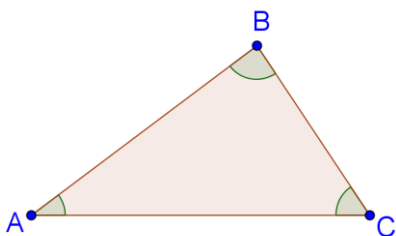Two angles whose measurements sum to _____ are called

_____.

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_____.

Note: The angles of a triangle sum to _____.

Ex 3.

Two angles are to be constructed from metal beams so that they are complementary angles. One of the angles is to be 6° less than three times the other angle. What are the angle measurements?
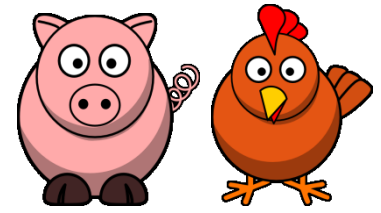
Using Tables to Help Solve Problems

Ex 4.

You sell two kinds of drinks: lemonade and guava juice. Each glass of lemonade costs $3, and each glass of guava juice costs $5. Suppose the number of glasses of lemonade you sold one day was 10 less than twice the number of glasses of guava juice you sold. Also suppose that your total sales that day were $190. How many glasses of each kind of drink did you sell that day?

Categories	Value	Number	Amount

Ex 5.

A farmer has a total of 17 pigs and chickens. The combined number of legs is 58. How many pigs and how many chickens are there?

Categories	Value	Number	Amount