Today's Learning Goal(s):

By the end of the class, I will be able to:

a) convert an English sentence to a mathematical expression or equation

NOTE: This "completed" handout is available in Google Drive.
For the first half of the lesson,
there is no need to copy anything down, just pay attention.

Date: Sept. 8, 2016

Unit 1: Linear Systems (Chapter 1)

View p. 3 Chapter Problem

A **variable** is a letter or symbol used to represent a value that can change. For example, x is the variable in the expression $3x + 2$.

An **expression** is a mathematical phrase made up of numbers and variables, connected only by operators. For example, $3x + 2$ is an expression, whereas $3x + 2 = 8$ is **not**. The latter is an **equation**.

Ex. 1: Translate each phrase into an algebraic expression.

a) five more than twice a number

Let x represent the number.

the expression is: $2x + 5$

b) half a number then increased by 6

the expression is: $\frac{1}{2}x + 6$

c) a value decreased by the fraction one half

the expression is: $x - \frac{1}{2}$

d) thirty percent of the volume

Recall: $30\% = 0.30$

the expression is: $0.30\ V$

e) six and one-half percent of a price

Recall: $6\frac{1}{2}\% = 6.5\% = 0.065$

the expression is: $0.065x$

Ex. 2: Translate each sentence into an algebraic equation.

a) Three times a number subtracted from four, is five more than six times the number.

Let x represent the number.

$$4 - 3x = 6x + 5$$

b) When tickets to a soccer game cost $4 each, the revenue at the gate yields $320.

Let x represent the number of tickets sold.

$$4x = 320$$

c) *Use two variables:* Mario's daily earnings are $80, plus 12% commission on his sales.

Let x represent Mario's sales, in dollars.

Let y represent Mario's total earnings, in dollars.

$$y = 80 + 0.12x$$

TODAY'S ENTERTAINMENT: p. 17 #1-4, 6

This is only the 1st half of the lesson, and 1st half of the homework.