Warm Up:
Solve each equation.

\[4p + 2 = 3p - 7\]  
\[3 + 5q = 9 + 4q\]

ACT Question:
What is the value of x when \(3x - 5 = 4x + 9\)?

A.) -14  B.) -5  C.) 0  D.) 1  E.) 2

Learning Goal: IWBAT rewrite and use literal equations and formulas.

Vocabulary:

**Literal Equation:** is an equation with two or more variables.

**Formula:** is an equation that states a relationship among quantities.

Examples 1 and 2:
Solve each equation for y. Then find the value of y for each value of x.
Examples 3 and 4:
Solve each equation for $y$. Then find the value of $y$ for each value of $x$.

$4x = 3y - 7; x = 4, 5, 6$

Example 5:
(with your shoulder buddy)
Solve each equation for $y$. Then find the value of $y$ for each value of $x$.

$6x = 7 - 4y; x = -2, -1, 0$

Examples 6 and 7:
Solve each equation for $x$.

$y = x - v$

$4(x - b) = x$

Examples 8 and 9:
Solve each problem. Round to the nearest tenth, if necessary. Use 3.14 for $\pi$.

What is the radius of a circle with circumference $22m$?

What is the length of a rectangle with width 10 in and area 75 in$^2$?
Example 10:
You can use the formula \( a = \frac{h}{n} \) to find the batting average \( a \) of a batter who has \( h \) hits in \( n \) times at bat. Solve the formula for \( h \). If a batter has a batting average of \( .290 \) and has been at bat \( 300 \) times, how many hits does the batter have?

Examples 11 and 12:
Solve each equation for the given variable.

Summary
What does literal equation mean?

Is solving for a letter without numbers any different then solving equations?