## Mini-Lecture 1.3

Using Formulas to Solve Problems

## Learning Objectives:

1. Solve for a variable in a formula.
2. Use formulas to solve problems.

## Preparing for Formulas:

Given the decimal 0.985 , approximate by
i) Truncating to two decimal places
ii) Rounding to one decimal place

## Examples:

1. Solve the formula for the indicated variable.
a) $V=\frac{1}{3} B h$ for $h$
b) $A=P+P r t$ for $t$
c) $\quad A=\frac{1}{2} h(B+b)$ for $B$
d) $6 x-8 y=-24$ for $y$
2. Cylinders The surface area, $A$, of a right circular cylinder is given by the formula $A=2 \pi r h+2 \pi r^{2}$ where $r$ is the radius of the base and $h$ is the height of the cylinder.
a) Solve the formula for $h$.
b) Determine the height of a cylinder whose radius measures $\frac{3}{2}$ inches and whose surface area is $30 \mathrm{in}^{2}$. Round your answer to the nearest tenth of an inch.
3. Angles of a Triangle The sum of the measures of the interior angles of a triangle is $180^{\circ}$. The measure of the first angle is $15^{\circ}$ less than the second. The measure of the third angle is $45^{\circ}$ more than half of the second. Find the measure of each interior angle of the triangle.
