

Algebra 1A

Unit 2

Lesson 13, Part 1

More Than Two Unknowns

① pick a letter to represent what you don't know

② write equations to show the relationships between each unknown

* example #1

$$\text{Tim} + \text{Sally} + \text{Jane} = 24$$

$$T + S + J = 24$$

$$S = J$$

so

$$T + S + S = 24$$

$$T + 2S = 24$$

and

$$T + 3 = S$$

$$\rightarrow T + 2(T + 3) = 24$$

③ Rewrite the equations with only 1 variable

④ Solve

⑤ Find the other numbers using the 1st one

* ex#2

① x, y, z

② $x + y + z = 76$

$2x = y$

$y + 1 = z$

③ $x + 2x + z = 76$

$x + 2x + y + 1 = 76$

$x + 2x + 2x + 1 = 76$

④ $5x + 1 = 76$

$-1 -1$

$\frac{5x}{5} = \frac{75}{5}$

$x = 15$

⑤ $2x = y$
 $2(15) = y$
 $30 = y$

$y + 1 = z$
 $(30) + 1 = z$
 $31 = z$