VI. Uniform Motion (p.200): distance $=$ rate $\times$ time


| STEP 3 | distance | speed | time |
| :---: | :--- | :--- | :--- |
| Event 1 |  |  |  |
| Event 2 |  |  |  |

fill-in 2 columns w/given info, then use these two quantities to fill-in the missing $3^{\text {rd }}$ column...
VII. Misc. Examples (p.206): Exercises \#32,38,24?

HW: pp.205-207 / Exercises \#31,35,37,47,49 Read pp.208-214 (section 3.3)

## I. Systems of Linear Equations (in 3-variables):

$$
\begin{aligned}
\mathrm{a}_{1} \boldsymbol{x}+\mathrm{b}_{1} \boldsymbol{y}+\mathrm{c}_{1} \boldsymbol{z} & =\mathrm{d}_{1} \\
\mathrm{a}_{2} \boldsymbol{x}+\mathrm{b}_{2} \boldsymbol{y}+\mathrm{c}_{2} \boldsymbol{z} & =\mathrm{d}_{2} \\
\mathrm{a}_{3} \boldsymbol{x}+\mathrm{b}_{3} \boldsymbol{y}+\mathrm{c}_{3} \boldsymbol{z} & =\mathrm{d}_{3}
\end{aligned}
$$

where $\mathrm{a}_{\mathrm{i}}, \mathrm{b}_{\mathrm{i}}, \mathrm{c}_{\mathrm{i}}$ and $\mathrm{d}_{\mathrm{i}}$ are real \# constants
e.g., $\quad 2 \boldsymbol{x}+\boldsymbol{y}-2 z=-1$
$3 x-3 y-z=5$
$x-2 y+3 z=6$
whose solution is $(\boldsymbol{x}, \boldsymbol{y}, \boldsymbol{z})=(1,-1,1)$
since $2(1)+(-1)-2(1)=-1$
and $3(1)-3(-1)-(1)=5$
and $\quad(1)-2(-1)+3(1)=6$

## II. Methods of Solution:

1. Elimination (p.210) - "reduce" to a 2 equation system
2. Graphing and/or substitution - not viable (not covered)
3. Matrix strategies - sections 3.4-3.5 (omit/not covered)

## III. Example (p.215): Exercises \#6

