A travel agency offers two Boston outings. Plan A includes hotel accommodations for 3 nights and two pairs of baseball tickets worth $518. Plan B includes hotel accommodations for 5 nights and four pairs of baseball tickets worth $907. Find the cost of one night's hotel accommodations and one pair of baseball tickets.

$$-2(3x + 2y = 518) \rightarrow \begin{array}{r} -6x - 4y = -1036 \\ 5x + 4y = 907 \\ \hline -x = -129 \end{array}$$

$$5x + 4y = 907$$

$$\frac{-x}{-1} = \frac{-129}{-1}$$

$$\boxed{x = 129}$$

$$3(129) + 2y = 518$$

$$387 + 2y = 518$$

$$-387 \qquad -387$$

$$\frac{2y}{2} = \frac{131}{2}$$

$$\boxed{y = 65.5}$$

$$5(129) + 4(65.5) = 907 \checkmark$$

$$907 = 907$$

$129 per night
$65.50 per pair of ticket

Homework Questions?

3 Types of Word Problems

#1 ᘯ2

*If you have 3 money numbers

   -write **Money Equation** $\$x + \$y = Total \$$

   -write **Amount Equation** $x + y = Total \#$

   -solve for <u>both variables</u>

        $x =$
        $y =$

*If problem asks for **SAME** amount

   -write equations in $y = mx + b$ format

   -set equations **EQUAL** to each other

         $mx + b = mx + b$ #'s

   -**Solve** for the ONE VARIABLE

> *Same means set Equations =*

7.4 Word Problem Quiz

When Done...

- Check you showed ALL WORK
- Turn into basket & work on HW

7.4 Homework

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(You get to pick the method you want)

Graphing, Substitution, Linear Combinations