

## Solving Real-World Systems Word Problems HW

1) Solve by substitution:

$$4y - x = 9$$

$$3y + 2x = 4$$

2. Jonas needs a cell phone. He has a choice between two companies with the following monthly billing policies. Each company's monthly billing policy has an initial operating fee and charge per minute.



	Operating Fee	Charge per Minute
<b>Terri's Telephone</b>	29.95	0.14
<b>Carrie's Connection</b>	4.95	0.39

- Define your variables.
  - Write a system of equations to model the above situation.
  - At how many minutes is the monthly cost the same? What is the equal monthly cost of the two plans? Use mathematics to explain how you determined your answer. Use words, symbols, or both in your explanation.
3. Movies Are Us has two video rental plans. The Regular video rental plan charges \$ 3.25 for each video rental. The Preferred video rental plan has an \$ 8.75 membership fee and charges \$ 2 for each video rental.
- Define your variables.
  - Write a system of equations to model the above situation.
  - How many video rentals give the two plans the same cost? What is the equal cost? Use mathematics to explain how you determined your answer. Use words, symbols or both in your explanation.

4) Solve for a.  $24a - 22 = -4(1 - 6a)$

5) Solve for x.  $-5(1 - 5x) + 5(-8x - 2) = -4x - 8x$