

NAME _____

Section 5.4

ALGEBRA

Date _____ Period _____

Systems of Word Problems: Practice A

- 1) Terry bought 4 sodas and 3 slices of pizza, and it cost him \$10. Harold bought 5 sodas and 2 slices of pizza and it cost him \$9. What is the cost, in dollars, of one one soda?

First item: _____ - Let x = the cost of one _____.

Second item: _____ - Let y = the cost of one _____.

Two equations in standard form →

Use matrix to solve for x and y . $x =$ _____ $y =$ _____

Reread the the question - answer the question!!!

- 2) Uncle Bill wants to choose what construction company he wants to build his new swimming pole. Look at the chart below...

Company	Initial Cost	Daily Rate
Drevitch Masonary	\$1000	\$75
Construx	\$1500	\$50

Let x = the number of days it takes to finish the job.

A system of equations, for the total cost y , is ...

$$\begin{cases} y = 1000 + 75x \\ y = 1500 + 50x \end{cases}$$

After how many years will the cost be the same (what is the value of x ?!)

- a) 10 b) 20 c) 50 d) 70

- 3) Jermaine lost 2 text books and 1 calculator. It cost him \$200 to replace what he lost. Larry lost 3 text book and 2 calculators. It cost him \$340 to replace what he lost. What is the cost, in dollars, of 1 text book? (Hint: Write two equations and use matrix)
- 4) Tom's gym charges \$12 membership and \$3 per day. Mike's gym charges \$5 membership and \$4 per day.

Let x = the number of days going to the gym

Let y = the total cost of going to the gym

Which system of equations below correctly models this situation.

a) $\begin{cases} y = 5x \\ y = 12x \end{cases}$ b) $\begin{cases} y = 4 + 5x \\ y = 3 + 12x \end{cases}$ c) $\begin{cases} y = 5 + 4x \\ y = 12 + 3x \end{cases}$ d) $\begin{cases} y = 9x \\ y = 15x \end{cases}$

- 5) In the equations below, c represents cost of CD's and d represents cost of DVD's. Solve the system and determine the cost, in dollars, of one CD.

$$\begin{cases} 5c + 4d = 80 \\ 3c - 2d = 10 \end{cases}$$

- 6) Nextel has an initial fee of \$125 and a monthly charge of \$50. AT&T has an initial fee of \$75 and month fee of \$60.

Let x = the number of months you have a cell phone

Let y = the total cost of the cell phone over that time period

Which system of equations below correctly models this situation.

a) $\begin{cases} y = 50x + 125 \\ y = 60x + 75 \end{cases}$ b) $\begin{cases} y = 175x \\ y = 135x \end{cases}$ c) $\begin{cases} y = 125x + 50 \\ y = 75x + 60 \end{cases}$ d) $\begin{cases} y = 50 + 125x \\ y = 60 + 75x \end{cases}$