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Week of $\qquad$ - $\qquad$

Monday

Name: $\qquad$
Period: $\qquad$

Friday

Algebra I - Unit 4 - Intro to Systems

## Practice - I ntro to Systems

Name Date $\qquad$ Period $\qquad$
Determine if the given point is a solution to the equation.

1. $(-3,6) \quad 2 \mathrm{x}-\mathrm{y}=-12$ $3 x+2 y=-3$
2. $(-1,-4) \quad 3 y=x-11$
$-2 x+y=-2$
3. $(4,1) x+2 y=6$
$x-y=3$
4. $(2,1) 2 x-5 y=-1$
$3 x-4 y=-2$

Determine the number of solutions for each system. Write "one", "none" or "infinite".
5. $y=\frac{2}{3} x-5$
$3 y=2 x$
6. $\quad \begin{aligned} & 3 x+y=3 \\ & 2 y=-6 x+6\end{aligned}$
7. $\quad \begin{aligned} & x+2 y=5 \\ & 2 x+4 y=2\end{aligned}$

## Practice - Writing Systems of Equations

Name $\qquad$ Date $\qquad$ Period $\qquad$
Write the Let Statements and derive a system of equations that could be used to solve each problem.

1. The admission fee at a small fair is $\$ 1.50$ for children and $\$ 4.00$ for adults. On certain day, 2200 people enter the fair and $\$ 5050$ is collected. How many children and how many adults attended?

Let Statements

2. The treasurer of the student body at a college reported that the receipts from a recent concert totaled $\$ 916$. Furthermore, he announced that 560 people had attended the concert. Students were charged $\$ 1.25$ each for admission to the concert, and adults were charged $\$ 2.25$ each. How many adults attended the concert?

Let Statements

3. Elle went to Pet Smart and bought 4 goldfish and 3 turtles for $\$ 28$. Later that day, Warren went to Pet Smart and bought 6 goldfish and 1 turtle for $\$ 10$. How much does 1 goldfish cost?

Let Statements

4. The perimeter of a rectangle is 40 . The width is four less than 5 times the length. Find the dimensions of the rectangle.

Let Statements

5. A pet shop sold a total of 23 puppies and kittens one week. They sold 9 more puppies than kittens. How many of each did they sell?

Let Statements
6. A boy has seven more nickels than quarters. The total value of the coins is $\$ 4.90$. Which system could be used to find how many nickels and quarters he has?
A $\begin{aligned} & n=7+q \\ & 0.05 n+0.25 q=4.90\end{aligned}$
B.
$n=7 q$
$q=7+n$
D $n=7+q$
$n+q=4.90$
C. $0.05 n+0.25 q=4.90$
D. $n+q=4.90$
$\qquad$ Date $\qquad$ Period $\qquad$

## Find the solution for each system of linear equations.

1. $y=2 x$
$x+y=12$
2. $\begin{aligned} & y=2 x-5 \\ & 4 x+y=7\end{aligned}$
3. $4 y+x=5$
4. If $\begin{gathered}-2 x+3 y=14 \\ x+2 y=7\end{gathered}$, then $x-y=$ ?
5. The equations of two lines are $2 x-3 y=12$ and $x=4 y+1$. What is the value of $x$ in the solution for this system of equations?

Find the solution for each system of linear equations.
8. Tyler is six years older than his sister, and the sum of their ages is 32 . How old is Tyler? How old is his sister?

Let Statements

9. What mistake was made in solving the following system of equations?

$$
\begin{aligned}
& -3 x+y=-4 \\
& 3 y=15 x+6
\end{aligned} \longrightarrow y=3 x-4
$$

Step 1: $3(3 x-4)=15 x+6$
Step 2: $9 x-12=15 x+6$
Step 3: $6=24 x$
Step 4: $\frac{1}{4}=x$
A Did not solve for $y$ correctly
B Did not distribute correctly in Step 1
C Should have subtracted $9 x$ from $15 x$ in Step 2
D No mistake was made
10. Given the equations $y-3 x=8$ and $3 x=2 y+7$, what would you substitute for $y$ in the equation $3 x=2 y+7$ ?
A $8-3 x$
B $\frac{8}{3} x$
C $8+3 x$
D $8 \cdot 3 x$

