Name:
Period: $\qquad$
Directions: Graph each system of equations to find the intersection.

1. $y=-\frac{4}{3} x+6$ and $y+10=\frac{1}{4}(x+7)$

2. $y=\frac{2}{5} x+1$ and $2 x-5 y=20$

3. $3 x-4 y=-18$ and $y-12=-\frac{2}{3}(x+7)$

4. $3 x-4 y=12$ and $y+9=\frac{3}{4}(x+8)$


Directions: Find the intersection of each pair of lines. Show all work.
5. $\begin{aligned} & y=-3 x-6 \\ & 4 x-y=-22\end{aligned}$
6. $y=\frac{5}{6} x+3$
$y=2 x-11$
8. $y=-\frac{3}{4} x-8$
$y=-3 x+10$

Directions: Identify both variables, set-up both equations, then use substitution to solve the word problems, and then answer the question in a complete sentence. Show all work!!!
9. Mary is twice as old minus 1 year older as her sister Rachel. Together their ages add up to 35 . How old are Mary and Rachel?
10. Peter works 2 jobs, working as a driver for a package delivery service and as a guitar tutor. He makes $\$ 16$ an hour delivering packages and $\$ 30$ an hour tutoring guitar students. One week he worked 45 hours making $\$ 860$. How many hours did he work at each job that week?
11. Rocky played 2 basketball games at the local gym on Saturday. He scored twice as many points plus 5 in the $2^{\text {nd }}$ game than he did in the $1^{\text {st }}$ game. For the 2 games he scored 35 points. How many points did he score in each game?
12. Jennifer bought some $t$-shirts and some pairs of jeans for $\$ 168$. She bought 2 more $t$-shirts than she did pair of jeans. How much is each $t$-shirt and pair of jeans?

Directions: Find the intersection of each pair of equations by using elimination. Show all work!!!
13. $7 x-4 y=6$
$5 x-4 y=10$
14. $\begin{aligned} & 9 x-2 y=36 \\ & x+2 y=24\end{aligned}$
$3 x-5 y=-76$
16. $\begin{aligned} & 8 x+5 y=-83 \\ & 2 x-5 y=73\end{aligned}$

Directions: Complete the parent function chart.

| PARENT <br> FUNCTION: |  |  | CONSTANT |
| :--- | :---: | :---: | :---: |
| FUNCTION <br> EQUATION: | $f(x)=\|x\|$ |  |  |
|  | $\uparrow$ |  |  |
| GRAPH: | $\leftarrow$ |  |  |
| DOMAIN IN <br> SET <br> NOTATION: | $\downarrow$ |  |  |
| RANGE IN <br> SET <br> NOTATION: |  |  |  |

