Name: _____ Score: _____

## FUNCTION TABLE

Complete the function table:

1) $f(x) = x^2 + 4$

| $x$ | 2 | 5 | 7 | 8 | 10 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |

2) $f(x) = 3x - 5$

| $x$ | -1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |

3) $f(x) = 2x$

| $x$ | $-2$ | 0 | 2 | 4 | 6 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |

4) $f(x) = x^3$

| $x$ | $-2$ | $-1$ | 0 | 1 | 2 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |

5) $f(x) = -x + 2$

| $x$ | $-5$ | -4 | $-3$ | $-2$ | -1 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |

6) $f(x) = 3x^2 - 2x$

| $x$ | $-3$ | -1 | 0 | 1 | 3 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |

7) $f(x) = x - 5$

| $x$ | 3 | 6 | 9 | 12 | 15 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |

8) $f(x) = 2x^2 + 8$

| $x$ | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |

9) $f(x) = (x - 1)^3$

| $x$ | $-1$ | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |

10) $f(x) = 5x - 8$

| $x$ | $-7$ | $-6$ | -5 | $-4$ | -3 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |

11) $f(x) = x^3 - 1$

| $x$ | -4 | -2 | 0 | 2 | 4 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |

12) $f(x) = 7x^2 - 3$

| $x$ | $-1$ | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |



LESSON 11-1

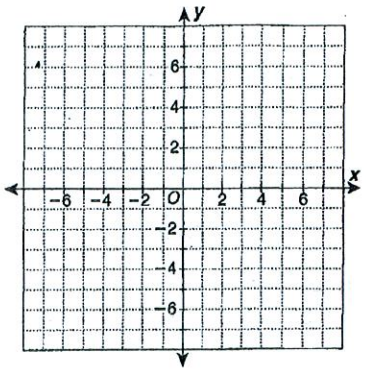
## Homework and Practice

### *Graphing Linear Equations*

**Graph each equation and tell whether it is linear.**

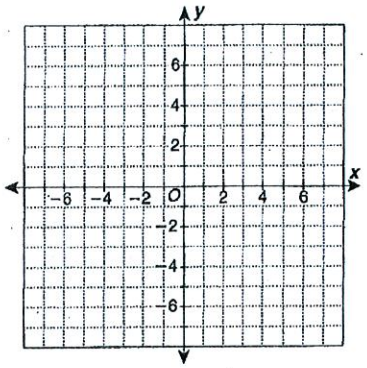
**1.** $y = -3x - 4$

| $x$ | $-3x - 4$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $-4$ | | | |
| $-3$ | | | |
| $-2$ | | | |
| $-1$ | | | |
| 0 | | | |
| 1 | | | |
| 2 | | | |




**2.** $y = x^2 + 2$

| $x$ | $x^2 + 2$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $-3$ | | | |
| $-2$ | | | |
| $-1$ | | | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |




**3.** A pharmaceutical representative sells $48,000 in a one month period. The rep earns 5.5% commission plus base salary of $400 a month. How much is the rep paid that month?

_____

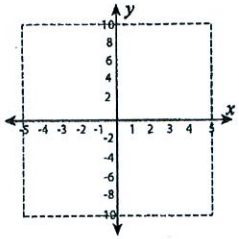
Name : _____ Score : _____

## Graphing Linear Function

Compute the function table. Draw the graph of each function.

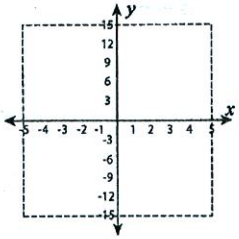
1) $f(x) = -x+3$

| $x$ | -5 | -3 | -1 | 1 | 3 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |



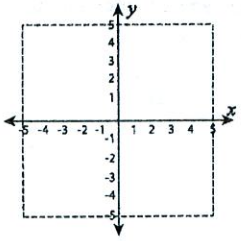
2) $f(x) = 3x-6$

| $x$ | 0 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |



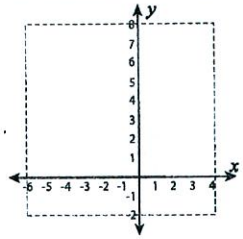
3) $f(x) = 3+2x$

| $x$ | -4 | -3 | -2 | -1 | 0 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |



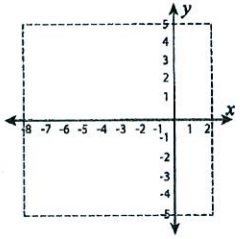
4) $f(x) = 5-x$

| $x$ | -3 | -2 | -1 | 0 | 3 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |



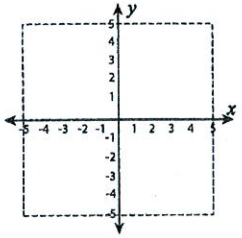
5) $f(x) = 2x+9$

| $x$ | -7 | -5 | -4 | -3 | -2 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |



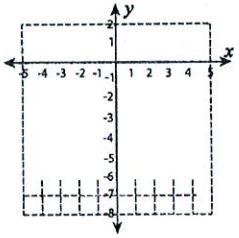
6) $f(x) = 1-2x$

| $x$ | -2 | -1 | 0 | 1 | 2 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |



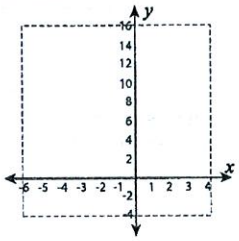
7) $f(x) = x-3$

| $x$ | -5 | -4 | 0 | 3 | 5 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |



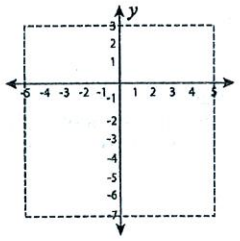
8) $f(x) = -2x+4$

| $x$ | -4 | -2 | 0 | 2 | 4 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |



9) $f(x) = x-4$

| $x$ | -3 | -1 | 1 | 3 | 5 |
|---|---|---|---|---|---|
| $f(x)$ | | | | | |





# Make Your Own Function

You're going to take a turn at creating a function word problem!!! You'll practice an application problem that I've created and then step by step create your own. Ask those around you to check your work to be sure everything looks good and is accurate. Then you will create a 'poster' showing your problem. Model your application problem after my own below.

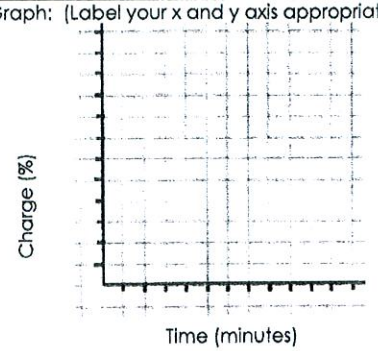
Your example and poster should include: *Written word problem. *A table with the input/domain/x values, rule with work, output/range/y, and ordered pairs. *A graph showing your function. *A statement as to if your function is linear or non-linear and why.

My Example:
Auto Life is a repair shop that rehabilitates car parts. The most popular department is for automobile batteries that are not to their full capacity charge (100%). Tommy has a battery that has 20% of its full capacity full. He connects it to a charger and with every minute that passes, the battery gains an additional 5% in charge.

T-Table

| Time Domain (x) | Rule | Charge (%) Range (y) | Ordered Pair |
|---|---|---|---|
| 0 | | | |
| 1 | | | |
| 3 | | | |
| 5 | | | |
| 7 | | | |

Graph: (Label your x and y axis appropriately.




Your example:

T-Table

| Time Domain (x) | Rule | Charge (%) Range (y) | Ordered Pair |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Graph: