HOMEWORK

Name: _____ **Hour:** _____

Paloma looks at the table below and believes it is a linear function. Rebeca disagrees and thinks it is a non-linear function. Who do you agree with? Why?

1.

x	0	1	2	3	4	5	6
y	0	2	8	18	32	50	72

Matias looks at the table below and believes it is a linear function. Arjun disagrees and thinks it is a non-linear function. Who do you agree with? Why?

2.

x	0	1	2	3	4	5	6
y	5	7	9	11	13	15	17

Give an example of a table that represents a linear function.

3.

x							
y							

Give an example of a table that represents a non-linear function.

4.

x							
y							

5. Laila pays $20 each month to join an afterschool club. If Laila made a graph of the amount of money she has spent from September to June, would the graph be linear? Why or why not?

STANDARD: 8.F.3 Interpret the equation *y=mx+b* as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.
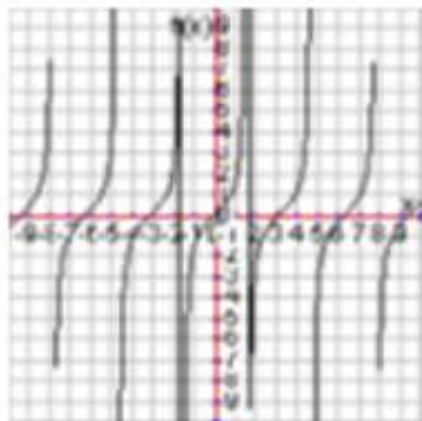
5

LESSON: Linear & Non-Linear Functions
Function Unit

Determine if each function representation is linear or non-linear and explain why.

6.

j	-1	0	1	2
k	-7	-4	-3	-2

7.

x	-1	0	1	2
y	4	2	0	-2

8.

m	-1	0	1	2
n	-5	5	-5	5

Create an X/Y Chart from each function, and determine if each function representation is linear or non-linear and explain why.

9. $y = \dfrac{3}{4}x - 7$

10. $a = -b + 2$

11. $c = 2d^3 - 1$

12. $y = x^2 + 3x$

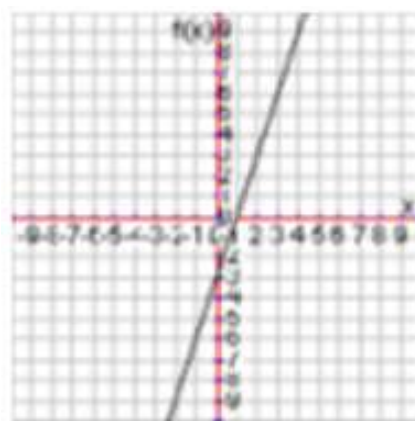# LESSON: Linear & Non-Linear Functions
Function Unit

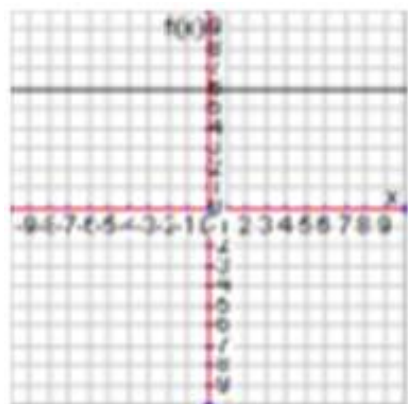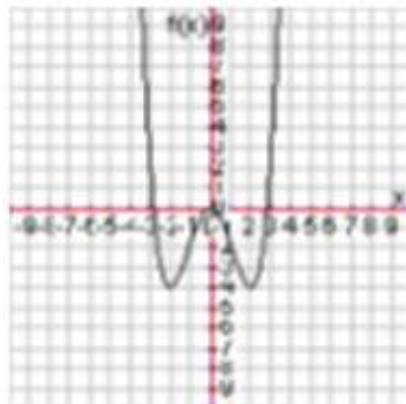**Determine if each function representation is linear or non-linear and explain why.**

13.

14.

15.

16.

LESSON: Linear & Non-Linear Functions
Function Unit

Determine if each function representation is linear or non-linear and explain why.

17. Your age based on the date

18. Input: Hours worked at hourly wage
    Output: Money made

19. Your Xbox gamer score based on the day of week

20. Input: Time falling
    Output: Speed

21. Input: Time in air
    Output: Height of an angry bird

22. Your weight based on the day of the year