Warmup: Matching Activity

Below are three graphs, three tables, and three functions. Identify the table and graph that represents each of the three functions.

A) $f(x) = 2x + 3$ B) $f(x) = 2x^2 + 3$ C) $f(x) = 2^x + 3$

1)

x	f(x)
-2	$\frac{13}{4}$
-1	$\frac{7}{2}$
0	4
1	5
2	7

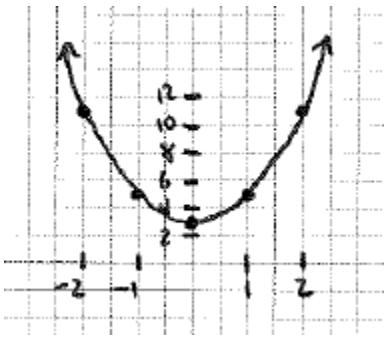
2)

x	f(x)
-2	-1
-1	1
0	3
1	5
2	7

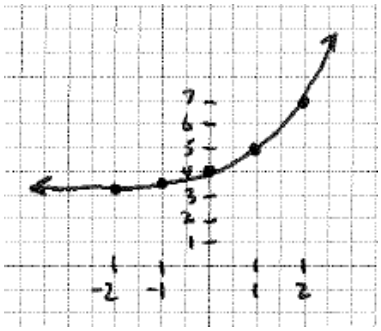
3)

x	f(x)
-2	11
-1	5
0	3
1	5
2	11

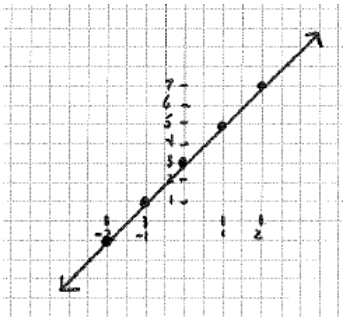
a)



b)



c)



Attribute	Linear Functions	Quadratic Functions	Exponential Functions
Rate of change			
Domain & Range			
Intercepts			
Asymptotes			
End Behavior			

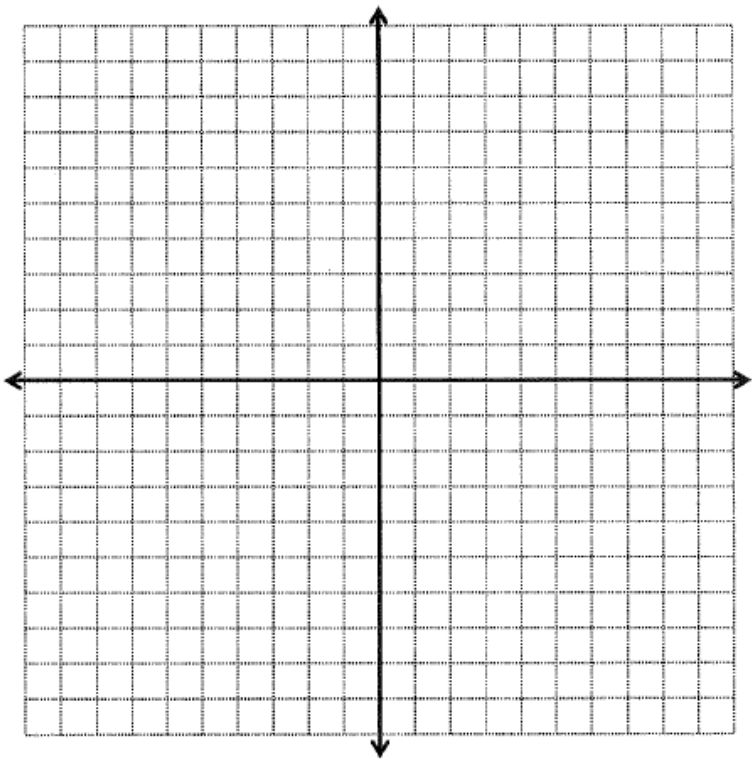
Functions to Graph and Discuss:

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

1. Complete the tables below.

Linear		**Quadratic**		**Exponential**	
$f(x) = 2x$		$g(x) = x^2$		$h(x) = 2^x$	
x	$f(x)$	x	$g(x)$	x	$h(x)$
–5		–5		–5	
–4		–4		–4	
–3		–3		–3	
–2		–2		–2	
–1		–1		–1	
0		0		0	
1		1		1	
2		2		2	
3		3		3	
4		4		4	
5		5		5	

2. Draw and label each graph on the same set of axes.



3. Identify the following features of each function.

(a) Domain and Range

(b) Description of Shape

(c) Any characteristics unique to each function

	Linear	Quadratic	Exponential
Domain Range			
Description of Shape			
Unique Characteristics To each function