Name: _____ Date: _____

LINEAR VERSUS EXPONENTIAL
COMMON CORE ALGEBRA I HOMEWORK

FLUENCY

1. For each of the following problems a table of values is given where $\Delta x = 1$. For each, first determine if the table represents a linear function, of the form $y = mx + b$, or an exponential function, of the form $y = a(b)^x$. Then, write its equation.

(a)

x	–1	0	1	2	3
y	4	7	10	13	16

Type: _____

Equation: _____

(b)

x	0	1	2	3	4
y	2	6	18	54	162

Type: _____

Equation: _____

(c)

x	–2	–1	0	1	2
y	32	16	8	4	2

Type: _____

Equation: _____

(d)

x	–2	–1	0	1	2
y	32	16	0	–16	–32

Type: _____

Equation: _____

(e)

x	0	1	2	3	4
y	16	20	25	$31\frac{1}{4}$	$39\frac{1}{16}$

Type: _____

Equation: _____

(f)

x	0	1	2	3	4
y	180	160	140	120	100

Type: _____

Equation: _____

2. The data shown in the table below represents either a linear or an exponential function. Which of the equations below best models this data set?

x	1	2	3	4
y	10	20	40	80

(1) $y = 5(2)^x$ $y = 2x + 10$

(2) $y = 10(2)^x$ (4) $y = 10x + 5$