Name_____ Period _____ Date_____

6.7 Worksheet

In Exercises 1 and 2, determine the type of function represented by the table. Explain your reasoning.

1.

x	1	3	5	7	9
y	81	27	9	3	1

2.

x	1	2	3	4	5
y	3	1	1	3	7

In Exercises 3 and 4, write an exponential function $y=a(b)^x$ for each set of data.

3.

x	0	2	4	6	8
y	$\frac{1}{8}$	$\frac{1}{2}$	2	8	32

4.

x	0	1	2	3
y	8	12	18	27

In Exercises 5–10, write an exponential function $y=a(b)^x$ whose graph passes through the given points.

5. $(1, 6), (2, 12)$

6. $(1, 20), (2, 80)$

7. $(2, 18), (3, 54)$

8. $(3, 1), (5, 4)$

9. $(2, 45), (4, 405)$

10. $(1, 2), (3, 50)$

11. Describe and correct the error in determining the type of function represented by the data.

x	0	1	2	3	4
y	2	4	8	16	32

$\times 2 \quad \times 2 \quad \times 2 \quad \times 2$

The outputs have a common ratio of 2, so the data represent an linear function.