

7-6

Practice

Form K

Exponential Functions

Determine whether each table represents a linear or an exponential function.

Explain. Remember that an exponential function exists when you have a constant ratio between the y values and a constant difference between the x values.

1.

x	1	2	3	4	5	6
y	2	4	8	16	32	64

2.

x	1	2	3	4	5	6
y	1	4	7	10	13	16

Graph each exponential function. Use $\{-2, -1, 0, 1, 2\}$ for the domain. **USE GRAPH PAPER.**

Is the graph showing *exponential growth* or *exponential decay*? (reminder: $f(x)$ means *function of x* , which replaces y)

3. $f(x) = 2 \cdot 3^x$

4. $y = 6 \cdot 0.5^x$

5. $y = 1.2^x$ (use a calculator for the values)

6. $y = \frac{1}{2} \cdot 4^x$

7. $y = 9 \cdot \left(\frac{1}{3}\right)^x$

8. $y = 3 \cdot 5^x$