Name _____ Class _____ Date _____

7-6 Practice

Form G

Exponential Functions

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

1.

x	1	2	3	4
y	3	9	27	81

2.

x	1	2	3	4
y	3	9	15	21

3. $y = 5 \cdot 2^x$

4. $y = 6 \cdot x^3$

5. $y = 3x - 8$

6. $y = 4 \cdot 0.3^x$

Evaluate each function over the domain {–2, –1, 0, 1, 2, 3}.

7. $f(x) = 3^x$

8. $y = 4.2^x$

9. $m(x) = 0.3^x$

10. $g(t) = 4 \cdot 3^x$

11. $y = 50 \cdot 0.1^x$

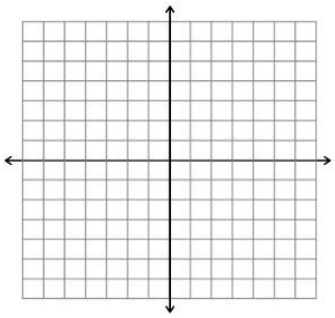
12. $f(x) = 2 \cdot 4^x$

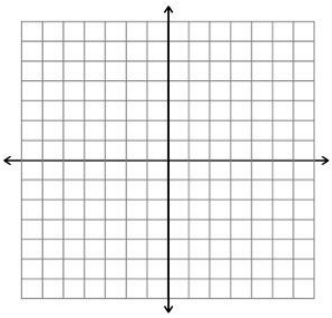
Graph each exponential function using a table of values. You may have to scale your graph!

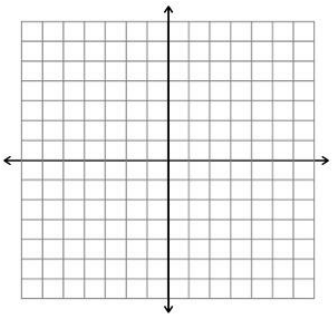
13. $f(x) = 3^x$

14. $y = 0.25^x$

15. $y = 2 \cdot 1.2^x$







16. An investment of $8000 in a certain Certificate of Deposit (CD) doubles in value every seven years. The function that models the growth of this investment is $f(x) = 8000 \cdot 2^x$, where x is the number of doubling periods. If the investor does not withdraw any money from this CD, how much money will be available for withdrawal after 28 years?

17. A population of amoebas in a petri dish will triple in size every 20 minutes. At the start of an experiment the population is 800. The function $y = 800 \cdot 3^x$, where x is the number of 20 minute periods, models the population growth. How many amoebas are in the petri dish after 3 hours?