Algebra I
2.1 Warm-Up
Linear and Exponential Functions

NAME:_____

DATE:_____ HOUR:____

For 1-6, determine the rule for each sequence. Identify the function as **linear** or **exponential**.

1. 4, 7, 10, 13, 16, ... _____ linear/exponential

2. 1, 2, 4, 8, 16, ... _____ linear/exponential

3. 11, 22, 33, 44, 55, ... _____ linear/exponential

4. $25, 5, 1, \frac{1}{5}, \frac{1}{25}, \ldots$ _____ linear/exponential

5. 3, 6, 12, 24, 48, ... _____ linear/exponential

6. 1, 3, 9, 27, 81, ... _____ linear/exponential

7. Suppose you are standing 16 feet from a wall. Each minute you walk one-half the distance to the wall. How far from the wall will you be after:

1 minute? _____ feet 2 minutes? _____ feet 3 minutes? _____ feet over

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**Write the rule for each sequence.**

1. 70, 35, 17.5, 8.75, ... _____

2. 2, 4, 8, 16, ... _____

3. 60, 600, 6000, 60000, ... _____

4. Write the first five terms of a sequence that starts with 9 and triples the previous number.

_____

5. Is the function in Exercise 4 linear or exponential? _____

6. The sequence 22, 44, 88, 176, 352, 704, ... is an example of which of the following functions?

**a.** linear **b.** exponential

**Find the next two terms in each sequence.**

7. 0.5, 0.1, 0.02, 0.004, _____, _____

8. 15625, 3125, 625, 125, _____, _____

9. Write the first five terms of a sequence that starts with 2 and triples the previous number. _____