

Test Review Unit 1

Skills Required:

- Identify type of sequence
- Determine common difference or ratio
- Write recursive & explicit equations for arithmetic & geometric sequences
- Find arithmetic & geometric means
- Use recursive & explicit equations

Identify the type of sequence and write a recursive and explicit equation.

1.

n	0	1	2	3
$f(n)$	5	20	80	320

- a) Is this arithmetic or geometric?
- b) Recursive:
- c) Explicit:
- d) Find the value of $f(8)$.

2.

n	1	2	3	4
$f(n)$	6	2	-2	-6

- a) Is this arithmetic or geometric?
- b) Recursive:
- c) Explicit:
- d) Find the value of $f(31)$.

3. John started the week with \$300. He spends \$15 per day.

- a) Is this arithmetic or geometric?
- b) Recursive:
- c) Explicit:
- d) How much money will he have after 13 days?
4. The population of Townsville triples every year. The original population was 3 people (the founding family).

- a) Is this arithmetic or geometric?
- b) Recursive:
- c) Explicit:
- d) How many people will be in the town in 7 years?
5. Fill in the missing terms for the given arithmetic sequence.

x	1	2	3	4	5
$g(x)$	12				40

Explain/show your method.

6. Fill in the missing terms for the given geometric sequence.

n	1	2	3	4
$f(n)$	3			-375

Explain/show your work.

7. Write the first 5 terms of the sequence represented by the equation:

$$f(x) = -2x + 8, \text{ starting at } f(1).$$

_____ / _____ / _____ / _____ / _____

Write the recursive equation for the above sequence.

8. Write the first 5 terms of the sequence represented by the equation:

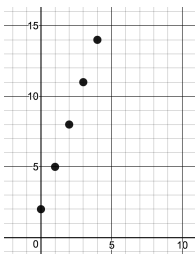
$$f(0) = 9, f(x) = 2 \cdot f(x - 1)$$

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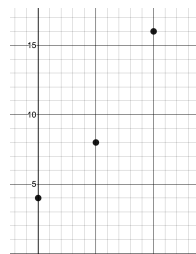
Write the explicit equation for the above sequence.

9. Match the equation with the graph. a) $f(n) = 3n + 2$ b) $f(n) = 4(2)^n$

Explain how you know which graph it is.



Graph of _____ because



Graph of _____ because

Go check your answers on my website: mspedmath.weebly.com