### Lesson 10 Practice Problems

1. A sequence is defined by  for . Write a definition for the term of .
2. A geometric sequence, starts 20, 60, . . . Define recursively and for the term.
3. A geometric sequence starts at 500 and has a growth factor of 0.6. Sketch a graph of showing the first 5 terms.

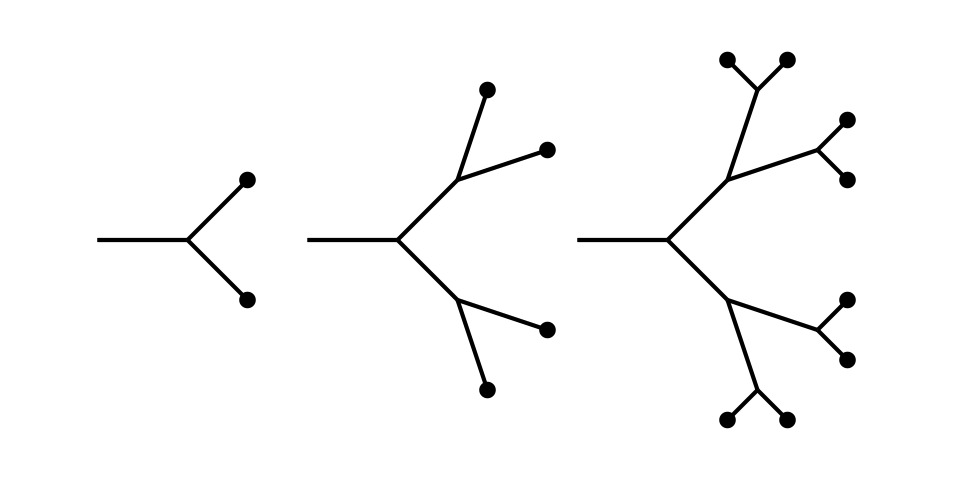
* (From Unit 1, Lesson 7.)
  1. An arithmetic sequence has and . Explain or show how to find the value of
  2. A geometric sequence has and . Explain or show how to find the value of .
* (From Unit 1, Lesson 8.)

1. A piece of paper has an area of 96 square inches.
   1. Complete the table with the area of the piece of paper , in square inches, after it is folded in half times.
   2. Define for the term.
   3. What is a reasonable domain for the function ? Explain how you know.

|  |  |
| --- | --- |
| * 0 | * 96 |
| * 1 |  |
| * 2 |  |
| * 3 |  |

* (From Unit 1, Lesson 9.)

1. Here is a growing pattern:

* 
  1. Describe how the number of dots increases from Stage 1 to Stage 3.
  2. Write a definition for sequence , so that is the number of dots in Stage .
  3. Is a geometric sequence, an arithmetic sequence, or neither? Explain how you know.
* (From Unit 1, Lesson 9.)

1. A paper clip weighs 0.5 grams and an empty envelope weighs 6.75 grams.
   1. Han adds paper clips one at a time to an empty envelope. Complete the table with the weight of the envelope , in grams, after paper clips have been added.
   2. Does make sense? Explain how you know.

|  |  |
| --- | --- |
| * 0 |  |
| * 1 |  |
| * 2 |  |
| * 3 |  |

* (From Unit 1, Lesson 9.)



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