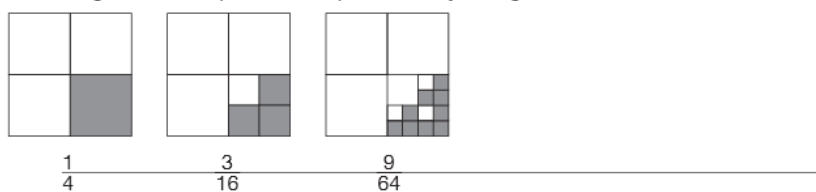


**LESSON 6.4** Assignment

Name \_\_\_\_\_ Date \_\_\_\_\_

**These Series Just Go On . . . And On . . . And On . . .**  
**Infinite Geometric Series**

1. The first three terms of an infinite geometric sequence are represented by the figures shown.



- a. Determine  $g_1$  and  $r$  for the sequence.
- b. Determine whether the series is convergent or divergent. Explain your reasoning.
- c. Compute the series.

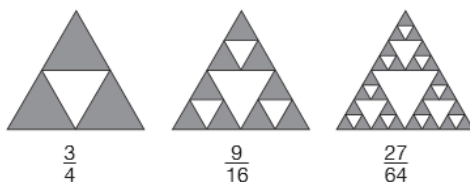
**LESSON 6.4** Assignment

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2. Consider the geometric series  $\frac{1}{100} + \frac{2}{100} + \frac{4}{100} + \frac{8}{100} + \dots$
- a. Determine whether the series is convergent or divergent. Explain your reasoning.

- b. Compute the series.

3. The first three terms of an infinite geometric sequence are represented by the figures shown.



- a. Determine  $g_1$  and  $r$  for the sequence.
- b. Determine whether the series is convergent or divergent. Explain your reasoning.

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- c. Compute the series.

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**LESSON 6.4** Assignment

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Name \_\_\_\_\_ Date \_\_\_\_\_

4. Consider the geometric series  $\frac{1}{5} + \frac{10}{45} + \frac{100}{405} + \dots$
- Determine whether the series is convergent or divergent. Explain your reasoning.

- Compute the series.