NAME:

**Lesson 1.3: Geometric Sequences**

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This assignment includes multiple choice and short answer questions. For multiple choice questions, select the best answer. Each is worth 1 mark. Marks assigned to short answer questions are indicated for each question. Be sure to show all necessary work.

**/1** 1. Determine the value of  in a geometric sequence if and .

1. –98 415
2. –32 805
3. 32 805
4. 98 415

Answer:

**/1** 2. Determine the value of the common ratio, *r*, for the geometric sequence 21, \_\_, \_\_, 7 203, \_\_.

1. 7
2. 19
3. 114
4. 343

Answer:

**/1** 3. Determine the value of the common ratio, *r*, for the geometric sequence \_\_, \_\_, 20, \_\_, 80.

1. –15
2. –2
3. 4
4. 30

Answer:

**/1** 4. Determine the number of terms, *n*, in the geometric sequence 6.4, 25.6, 102.4, ..., 26 214.4.

1. 6
2. 7
3. 8
4. 9

Answer:

1. Determine if the following sequences are geometric. Justify each decision. For the sequences that are geometric, determine the general term.

**/1**  a. 

**/1**  b. 50, 250, 1 250, …

1. A new annual festival just began in a small town in northern Alberta. In the first year, the festival had 25 participants. It is expected that the number of people attending the festival will double every year.

**/2** a. In how many years can the organizers expect 800 people in attendance?  
  
Answer:

**/1** b. What is assumed in order to answer part a.?  
  
Answer:

**/9**

You have completed *Lesson 1.3 Explore Your Understanding Assignment*. Please continue your exploration with *Lesson 1.4.*