

Unit 7: Representations of Exponential Relations  
POST TEST – Version A

Determine if the sequence is geometric. If it is, find the common ratio.

1. 2, 10, 50, 250 ...	2. 4, 16, 64, 256, ...
-----------------------	------------------------

Find the recursive formula for each of the following:

3. 2, 12, 72, 432, ...	4. -2, -12, -72, -432, ...
------------------------	----------------------------

Find the explicit formula for each of the following:

5. -2, -4, -8, -16, ...	6. 4, 24, 144, 864, ...
-------------------------	-------------------------

Given the following geometric sequences answer each of the following:

7. -3, -12, -48, -192, ...		
A. Find the next three terms	B. Find $a_8$	C. Find $a_9$

8. 1, 2, 4, 8, ...

A. Find the next three terms	B. Find $a_8$	C. Find $a_{10}$
------------------------------	---------------	------------------

Find the missing term or terms in each geometric sequence.

9. ..., -3, ____, -75, ...	10. ..., -1, ____, -4, ...
11. ..., 3, ____, ____, 375, ...	12. ..., -2, ____, ____, -54, ...
13. ..., 3, ____, ____, ____, 3888, ...	14. ..., 3, ____, ____, ____, 1875, ...
15. ..., 2, ____, ____, ____, ____, 2048, ...	16. ..., 4, ____, ____, ____, ____, 972, ...
17. ..., 2, ____, ____, ____, ____, ____, 1458, ...	18. ..., -4, ____, ____, ____, ____, ____, -256, ...

Evaluate each geometric series described.

19. $2 - 6 + 18 - 54 \dots, n = 8$	20. $3 + 6 + 12 + 24 \dots, n = 6$
21. $3 + 18 + 108 + 648 \dots, n = 7$	22. $-2 + 8 - 32 + 128 \dots, n = 7$
23. $\sum_{n=1}^9 4^{n-1}$	24. $\sum_{i=1}^9 2 \cdot 2^{i-1}$
25. $a_1 = -2, r = -2, n = 9$	26. $a_1 = 2, r = -4, n = 7$

Unit 7: Representations of Exponential Relations  
POST TEST – Version B

Determine if the sequence is geometric. If it is, find the common ratio.

1. 1, 3, 9, 27, ...	2. 4, 20, 100, 500, ...
---------------------	-------------------------

Find the recursive formula for each of the following:

3. 4, -12, 36, -108, ...	4. 4, -8, 16, -32, ...
--------------------------	------------------------

Find the explicit formula for each of the following:

5. 3, 15, 75, 375, ...	6. -4, -12, -36, -108, ...
------------------------	----------------------------

Given the following geometric sequences answer each of the following:

7. -1, 3, -9, 27, ...

A. Find the next three terms	B. Find $a_8$	C. Find $a_{11}$
------------------------------	---------------	------------------

8. 2, -4, 8, -16, ...

A. Find the next three terms	B. Find $a_8$	C. Find $a_{10}$
------------------------------	---------------	------------------

Find the missing term or terms in each geometric sequence.

9. ..., -2, __, -18, ...	10. ..., 3, __, 75, ...
11. ..., 1, __, __, 64, ...	12. ..., 1, __, __, 125, ...
13. ..., -2, __, __, __, -1250, ...	14. ..., -4, __, __, __, -5184, ...
15. ..., -1, __, __, __, __, -32, ...	16. ..., -2, __, __, __, __, -15552, ...
17. ..., -1, __, __, __, __, __, -4096, ...	18. ..., -3, __, __, __, __, __, -12288, ...

Evaluate each geometric series described.

19. $2 + 6 + 18 + 54 \dots, n = 6$	20. $-1 - 5 - 25 - 125 \dots, n = 7$
21. $1 - 4 + 16 - 64 \dots, n = 9$	22. $-2 - 12 - 72 - 432 \dots, n = 7$
23. $\sum_{i=1}^9 (-3)^{i-1}$	24. $\sum_{i=1}^9 -2 \cdot (-2)^{i-1}$
25. $a_1 = -2, r = 5, n = 8$	26. $a_1 = -3, r = 5, n = 8$

Unit 7: Representations of Exponential Relations  
POST TEST – Version C

Determine if the sequence is geometric. If it is, find the common ratio.

1. 3, 12, 48, 192 ...	2. -2, 4, -8, 16, ...
-----------------------	-----------------------

Find the recursive formula for each of the following:

3. 1, 5, 25, 125, ...	4. 2, 4, 8, 16, ...
-----------------------	---------------------

Find the explicit formula for each of the following:

5. 3, 6, 12, 24, ...	6. -3, -9, -27, -81, ...
----------------------	--------------------------

Given the following geometric sequences answer each of the following:

7. 1, -2, 4, -8, ...

A. Find the next three terms	B. Find $a_8$	C. Find $a_{11}$
------------------------------	---------------	------------------

8. -1, -5, -25, -125, ...

A. Find the next three terms	B. Find $a_8$	C. Find $a_9$
------------------------------	---------------	---------------

Find the missing term or terms in each geometric sequence.

9. ..., -2, ____, -8, ...	10. ..., 3, ____, 12, ...
11. ..., 2, ____, ____, 128, ...	12. ..., -2, ____, ____, -432, ...
13. ..., -3, ____, ____, ____, -1875, ...	14. ..., -3, ____, ____, ____, -48, ...
15. ..., -1, ____, ____, ____, ____, -1024, ...	16. ..., 4, ____, ____, ____, ____, 128, ...
17. ..., 2, ____, ____, ____, ____, ____, 31250, ...	18. ..., 4, ____, ____, ____, ____, ____, 62500, ...

Evaluate each geometric series described.

19. $-3 - 6 - 12 - 24 \dots, n = 7$	20. $1 - 3 + 9 - 27 \dots, n = 6$
21. $-2 - 6 - 18 - 54 \dots, n = 9$	22. $2 - 8 + 32 - 128 \dots, n = 6$
23. $\sum_{n=1}^9 2 \cdot (-5)^{n-1}$	24. $\sum_{m=1}^9 4 \cdot 2^{m-1}$
25. $a_1 = 2, r = -5, n = 7$	26. $a_1 = 2, r = -3, n = 7$