LEARNING AS ONE NATION

Expanded Project

L E A R N I N G A C T I V I T Y

Math 10_10

Name: _____ **Grade/Score:** _____

Year and Section: _____ **Date:** _____

Subject *(Check or choose from below.)* _____

- ☐ Religion/Values Education
- ☐ Natural Sciences
- ☐ Araling Panlipunan
- ☐ Filipino
- ☐ English
- ☐ Math
- ☐ TLE / ICT
- ☐ MAPEH

Type of Activity *(Check or choose from below.)*_____

- ☐ Concept Notes
- ☐ Skills: Exercise / Drill
- ☐ Laboratory Report
- ☐ Illustration
- ☐ Formal Theme
- ☐ Informal Theme
- ☐ Others: _____

Activity Title:	Finding the nth term of a Geometric Sequence
Learning Target:	To find the the nth term of a Geometric Sequence
References: *(Author, Title, Pages)*	http://www.mathisfun.com/algebra/sequences-sums-geometric.html V. G. Baja and M. V. Bernido, CVIF Learning Activities

A geometric sequence can also be written in the form:

$$a,\ ar,\ ar^2,\ ar^3, \ldots$$

where,

$\boldsymbol{a}$ is the first term, and $\boldsymbol{r}$ is the common ratio.

The equation to be used in finding the nth term of a geometric sequence is

$$\boxed{a_n = ar^{n-1}}$$

Example: Find the 7th term of the geometric sequence 4, 8, 16, …

Solution: The value of $a = 4$.

We get $r = 2$ by dividing the next term by the previous term.

To find the 7th term, we take $n = 7$.

Using the equation for the nth term we have,

$$\boldsymbol{a_7 = 4(2)^{7-1}}$$
$$\boldsymbol{a_7 = 4(2)^6}$$
$$\boldsymbol{a_7 = 4(64)}$$
$$\boldsymbol{a_7 = 256.}$$

Therefore, 256 is the 7th term of the given geometric sequence.

Exercises:

A. Find the 7th term of the sequence.

13, 26, 52, …

B. Give the geometric sequence up to the 5th term if $\boldsymbol{a = 7}$, and $\boldsymbol{r = 7}$.