

Warm Up

4/2/19

1. The rule for a geometric sequence is

$$a_n = 200(1/4)^{n-1}$$

200, 50, $\frac{50}{4}$, $\frac{50}{8}$

What is the 21st term in the sequence?

$$a_{21} = 200(1/4)^{21-1}$$

$$a_{21} = 1.8189894 \times 10^{-10}$$

2. Write the equation for an exponential decay of 13% per year from a boat worth \$48,500 when purchased.

$$y = a(1-r)^t \quad \boxed{y = 48500(.87)^t} \quad \begin{matrix} .13 \\ 1-.13 \end{matrix}$$

Find the value of the boat after 5 years.

$$y = 48500(.87)^5$$

$$\boxed{\$24,173.41}$$

Exponential Unit Practice