Exploring the World of Math

Name: _____   Date: _____

Similarity

1. Write a Fibonacci sequence from 1 to 610

F_1	F_2	F_3	F_4	F_5	F_6	F_7	F_8	F_9	F_{10}	F_{11}	F_{12}	F_{13}	F_{14}	F_{15}

2. Compute the following:

   a. $\dfrac{3}{4} = \dfrac{N}{8}$

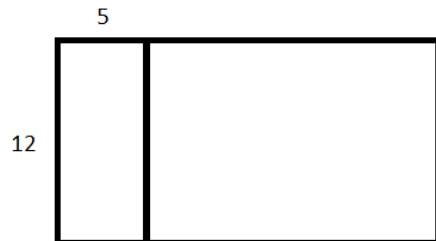   b. $\dfrac{5}{8} = \dfrac{N}{10}$

   c. $\dfrac{16}{N} = \dfrac{40}{3}$

   d. $\dfrac{N}{2.05} = \dfrac{(4+5)}{3}$

   e. $\dfrac{N}{N+1} = \dfrac{3}{8}$

3. Compute the following:

Gnomons

5

12

The first rectangle is 5 x 12. The overall larger rectangle shares the 12 side and is an unknown length that is proportional to 5:12.

$$\frac{5}{12} = \frac{12}{N}$$
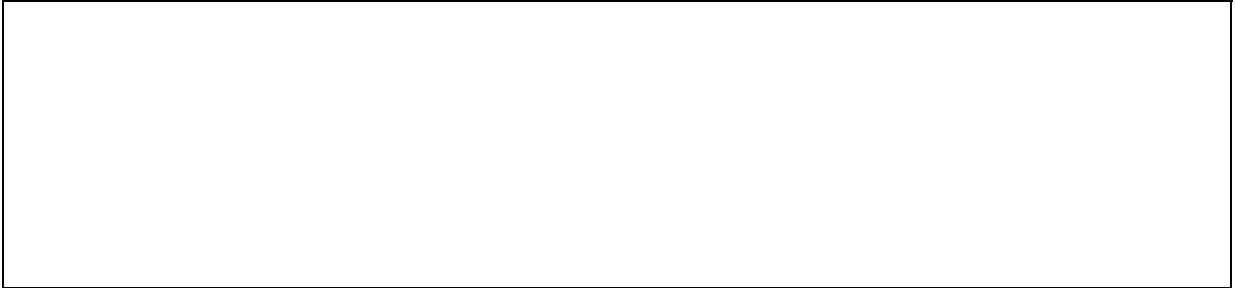
$$5N = 144$$

$$N = 28.8$$

The size of the attached rectangle is 12 by 23.8

Golden Ratio

4. What is the golden ratio   _____

5. Calculate the size of a rectangle with a 30 foot side if the proportions are the same as the golden ratio.

6. Calculate the size of a rectangle with a 5 meter side if the proportions are the same as the golden ratio.