

# Section 3.3: Geometric Sequences and Series

Tuesday, October 28, 2014  
9:09 AM

examples:

① 7, 14, 28, 56, ... 114688

② 100, 20, 4,  $\frac{4}{5}$ , ...

③  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ ,  $\frac{1}{16}$ , ...  $\frac{1}{256}$

④ 24, -16,  $\frac{32}{3}$ ,  $-\frac{64}{9}$ , ...

pattern?

mult by 2

mult by  $\frac{1}{5}$

mult by  $\frac{1}{2}$

mult by  $-\frac{2}{3}$

how do you find the number?

take any term and divide by previous

geometric sequence  $\equiv$  a sequence in which the next term is equal to the previous term multiplied by a constant

$\hookrightarrow$  common ratio  $r$