Find the common ratio for each geometric series

1) 3, 6, 12, 24, 48, ….

2) 16, -8, 4, -2, 1, ….

Write the first 4 terms of the geometric sequence

3. $a_1 = 5 \quad r = 3$

4. $a_1 = 200 \quad r = \dfrac{-1}{2}$

5. $a_n = 3(-2)^{n-1}$

6. $a_n = 12\left(\dfrac{1}{2}\right)^{n-1}$

7. Write the general rule for the sequences in problems 1 – 4 of the geometric sequence

Write the first 5 terms of the geometric sequence and the general term

1.   $a_1 = 2$   $a_{k+1} = 3a_k$

2.   $a_1 = 200$   $a_{k+1} = \dfrac{-1}{2}a_k$

Find the given term for the geometric sequence

3.   $a_1 = .5$   $r = 2$   $n = 10$

4.   $a_3 = -75$   $a_6 = -9375$   $n = 8$

Find the sum of each of the following geometric series.

1. $\displaystyle\sum_{n=1}^{12} 2\left(\frac{3}{4}\right)^{n-1}$

2. $\displaystyle\sum_{n=0}^{10} 2(4)^{n}$

1. $\displaystyle\sum_{n=1}^{\infty} 2\left(\frac{3}{4}\right)^{n-1}$

2. $\displaystyle\sum_{n=0}^{\infty} 2(4)^{n}$

Find the rational function/fraction for the decimal

4.   $.1\overline{25}$