IB PreHL Sequence Exit Slip #1 Criterion: Assignment 10 points) Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Period: \_\_\_\_\_\_\_\_\_\_\_

Arithmetic Sequences:  Geometric Sequences 

Arithmetic Series:  and Geometric Series  and  when 

**Compound Interest Formula: **

**Use of Notes and Calculator are allowed and you must show the steps how you reached the final answer. Without showing the work, the full credit will not necessarily be awarded.**

1. A geometric sequence and an arithmetic sequence both have first term 3. The 4th term of the arithmetic sequence and the 6th term of the geometric sequence are both 96.

a) Write an explicit formula for the arithmetic sequence b) Write an explicit formula for the geometric sequence

c) Find the 11th term of the arithmetic sequence. d) Find the common ratio of the geometric series.

2. Find the value of k for:

a) An Arithmetic Sequence with three consecutive terms: 

b) A Geometric Sequence with three consecutive terms: 

3. a. How much money must be invested today so that in 2 years the amount $18,000 can be withdrawn from the account, if the money is invested at 8% (annual interest) compounded quarterly.

b. If you have $8,000 to invest how much time would it take to reach the 18000?

4. The sum of three consecutive terms of a geometric sequence is 84 and their product is 4096. Find these terms.