**Honors Precalculus  
Chapter 1 “Can you?”**

1. Write an expression for an, the n-th term of an arithmetic sequence in explicit and recursive forms?

2. Calculate a given term of an arithmetic sequence?

3. Write an expression for the sum of the first n terms of an arithmetic sequence?

4. Calculate the sum of a given number of terms of an arithmetic sequence?

5. Do 1-4 for a geometric sequence?

6. Evaluate expressions in sigma notations?

7. Write an expression in sigma notation for a given series?

8. Use arithmetic and geometric sequences to solve real-life problems?

9. Calculate the sum of an infinite convergent geometric series?

10. Tell if a sequence is convergent or divergent?

11. Tell if a series is convergent or divergent?

12. Compute a median-median line?

13. Compute a least-squares regression line?

14. Explain the meaning of residuals?

15. Compute residuals and the sum of the squared residuals?

16. Use a linear model to predict a value?

17. Compute the correlation coefficient for a linear model and interpret it?

18. Construct a residual plot and interpret its meaning?

19. Describe in real life terms the meaning of the slope and y-intercept from a given linear model?

20. Describe the meaning of outliers?

21. Describe the meaning of interpolation and extrapolation?