

### **Expectations**

- 1.1 The student will represent functions and relations numerically, graphically, and algebraically.
- 4.2 The student will estimate and compute using mental strategies, paper and pencil, and technology.

### **Essential Questions**

How do sequences and series model real-world problems and their solutions?

How is the binomial theorem applied?

### **Enduring Understanding**

Discrete mathematics is the study of finite or discontinuous quantities.

### **Indicators**

- 1.1.PC.10 represent a series using summation notation.
- 1.1.PC.16 determine the sum, if it exists, of an infinite geometric series.
- 1.1.PC.18 expand and evaluate a series written in summation notation.
- 4.2.PC.6 expand powers of binomials applying the binomial theorem, factorials, and combinatorics.