## Financial Mathematics

General Outcome: *Develop number sense in financial applications.*

### Specific Outcomes

*It is expected that students will:*

12A.FM.1.    Solve problems that involve compound interest in financial decision making.
[C, CN, PS, T, V]

12A.FM.2.    Analyze costs and benefits of renting, leasing and buying.
[CN, PS, R, T]

12A.FM.3.    Analyze an investment portfolio in terms of:
- interest rate
- rate of return
- total return.

[ME, PS, R, T]

## Logical Reasoning

General Outcome: *Develop logical reasoning.*

### Specific Outcomes

*It is expected that students will:*

12A.L.1.  Analyze puzzles and games that involve numerical and logical reasoning, using problem-solving strategies.
[CN, ME, PS, R, T]

12A.L.2.  Solve problems that involve the application of set theory.
[CN, PS, R, T, V]

12A.L.3.  Solve problems that involve conditional statements.
[C, CN, PS, R, T]

## Mathematics Research Project

General Outcome:    *Develop an appreciation of the role of mathematics in society.*

### Specific Outcomes

*It is expected that students will:*

12A.RP.1.    Research and give a presentation on a current event or an area of interest that involves mathematics.
[C, CN, ME, PS, R, T, V]

## Relations and Functions

General Outcome:    *Develop algebraic and graphical reasoning through the study of relations.*

### Specific Outcomes

*It is expected that students will:*

12A.R.1.  Represent data, using polynomial functions (of degree $\leq 3$), to solve problems.
[C, CN, PS, T, V]

12A.R.2.  Represent data, using exponential and logarithmic functions, to solve problems.
[C, CN, PS, T, V]

12A.R.3.  Represent data, using sinusoidal functions, to solve problems.
[C, CN, PS, T, V]

## Design and Measurement

General Outcome:    *Develop critical thinking skills related to measurement design.*

### Specific Outcomes

*It is expected that students will:*

12A.D.1.  Analyze objects, shapes and processes to solve cost and design problems.
[C, CN, ME, PS, R, T, V]

## Probability

General Outcome: *Develop critical thinking skills related to uncertainty.*

### Specific Outcomes

*It is expected that students will:*

12A.P.1.  Interpret and assess the validity of odds and probability statements.
[C, CN, ME, T]

12A.P.2.  Solve problems that involve the probability of mutually exclusive and non–mutually exclusive events.
[CN, PS, R, T, V]

12A.P.3.  Solve problems that involve the probability of independent and dependent events.
[CN, PS, R, T]

12A.P.4.  Solve problems that involve the fundamental counting principle.
[PS, R, T, V]

12A.P.5.  Solve problems that involve permutations.
[ME, PS, R, T, V]

12A.P.6.  Solve problems that involve combinations.
[ME, PS, R, T, V]

Processes:
C – Communication                    CN – Connections                  ME – Mental Mathematics and Estimation
PS – Problem Solving                 R –  Reasoning                     T – Technology
V – Visualization