

Mathematical Connections

5 credits – Level II

Grades: 11-12

Prerequisites: Successful completion of an algebra and a geometry course

This course will focus on the application of mathematical concepts as an integral part of our lives. Math skills and concepts learned in previous courses will be extended and utilized in real-world applications experienced by all people in today's society.

PROFICIENCIES

EARNING MONEY

- To estimate an annual wage for an hourly worker.
- To determine the potential earnings of a worker through overtime, tips and commissions.
- To compare and contrast between net and gross pay.

MANAGING A HOUSEHOLD

- To plan monthly rent or mortgage payments utilizing various techniques.
- To solve problems related to down payment, monthly payment and total amount paid for mortgages including utility expenses.
- To compute expenses related to renter's insurance and home owner's insurance.

BUYING & MAINTAINING A CAR

- To compute the cost of an automobile taking into account trade-ins, rebates and other financing options.
- To compute insurance premiums, average miles driven, average time driving and fuel costs.
- To calculate yearly payment using lease, gas, repairs, and insurance.

IMPROVING YOUR HOME

- To find the area, perimeter, and volume of each room in a house.
- To calculate the cost of common home improvements to the walls, floors and furniture in a room.
- To compute the cost building an addition.
- To create, read and interpret a floor plan.

TRAVEL

- To compute travel fares, distances, hotel expenses, car rentals and parking charges.
- To read and interpret a legend on a map.
- To find the current exchange values for foreign currencies.
- To schedule a trip over multiple time zones.

BANKING & INVESTING

- To compute, compare and contrast simple and compound interest.
- To use and maintain a checking account.
- To compute the value of investments over time including computing the gains and losses.
- To evaluate profits and losses of investments.

TAXES

- To calculate percentages of large numbers, total exemptions, deductions and taxable income.
- To read and use tax tables to estimate taxes.
- To compute assets value, property taxes and effective tax rate.

MAKING BUDGET

- To determine the steps needed to create and balance a budget to cope with financial emergencies to remain comfortable within your needs.
- To list various expenses to be budgeted and determine the percent budgeted for each expense.
- To construct and interpret circle graphs based off your budget.