

KEY PRE-REQUISITE SKILLS TO HELP ACHIEVE PERSONAL SUCCESS IN MATH 10C

Generally speaking students have strong skills in Measurement therefore those curricular objectives are not highlighted below. Skills students have a tendency to struggle with are **operations with fractions, order of operation, and solving equations.**

NUMBER

Gr. 7	<ul style="list-style-type: none"> Addition and subtraction of positive fractions and mixed numbers, with like and unlike denominators. Addition and subtraction of integers symbolically.
Gr. 8	<ul style="list-style-type: none"> Understand perfect squares and square roots, concretely, pictorially and symbolically Solve problems that involve rates, ratios and proportional reasoning. Multiplying and dividing positive fractions and mixed numbers. Multiplication and division of integers.
Gr. 9	<ul style="list-style-type: none"> Demonstrate an understanding of operations on powers with integral bases (excluding base 0) and whole number exponents: <ul style="list-style-type: none"> $(a^m)(a^n) = a^{m+n}$ $a^m \div a^n = a^{m-n}, m > n$ $(a^m)^n = a^{mn}$ $(ab)^m = a^m b^m$ $\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}, b \neq 0.$ Explain and apply the order of operations, including exponents.

PATTERNS AND RELATIONS

Gr. 7	<ul style="list-style-type: none"> Create a table of values from a linear relation, graph the table of values, and analyze the graph to draw conclusions and solve problems. Explain the difference between an expression and an equation. Evaluate an expression, given the value of the variable(s). Model and solve problems that can be represented by linear equations of the form: <ul style="list-style-type: none"> ○ $x + a = b$ ○ $ax + b = c$ ○ $ax = b$ ○ $\frac{x}{a} = b, a \neq 0$
Gr. 8	<ul style="list-style-type: none"> Graph and analyze two-variable linear relations. Model and solve problems using linear equations of the form: <ul style="list-style-type: none"> ○ $ax = b$ ○ $\frac{x}{a} = b, a \neq 0$ ○ $ax + b = c$ ○ $\frac{x}{a} + b = c, a \neq 0$ ○ $a(x + b) = c$
Gr. 9	<ul style="list-style-type: none"> Generalize a pattern from a problem-solving context, using a linear equation, and verify by substitution. Graph a linear relation, analyze the graph, and interpolate or extrapolate to solve problems. Model and solve problems, using linear equations of the form: <ul style="list-style-type: none"> ○ $ax = b$ ○ $\frac{x}{a} = b, a \neq 0$ ○ $ax + b = c$ ○ $\frac{x}{a} + b = c, a \neq 0$ ○ $ax = b + cx$ ○ $a(x + b) = c$ ○ $ax + b = cx + d$ ○ $a(bx + c) = d(ex + f)$ ○ $\frac{a}{x} = b, a \neq 0$ Demonstrate an understanding of polynomials. Operations of addition and subtraction of polynomial expressions. Operations of multiplication and division of polynomial expressions (limited to polynomials of degree less than or equal to 2) by monomials.