

Curriculum outcomes for Math 10

Measurement:

M01 Students will be expected to solve problems that involve linear measurement, using SI and imperial units of measure, estimation strategies, and measurement strategies.

M02 Students will be expected to apply proportional reasoning to problems that involve conversions between SI and imperial units of measure.

M03 Students will be expected to solve problems, using SI and imperial units, that involve the surface area and volume of 3-D objects, including right cones, right cylinders, right prisms, right pyramids, and spheres.

M04 Students will be expected to develop and apply the primary trigonometric ratios (sine, cosine, tangent) to solve problems that involve right triangles.

Algebra and Number:

AN01 Students will be expected to demonstrate an understanding of factors of whole numbers by determining the prime factors, greatest common factor, least common multiple, square root, and cube root.

AN02 Students will be expected to demonstrate an understanding of irrational numbers by representing, identifying, simplifying, and ordering irrational numbers.

AN03 Students will be expected to demonstrate an understanding of powers with integral and rational exponents.

AN04 Students will be expected to demonstrate an understanding of the multiplication of polynomial expressions (limited to monomials, binomials, and trinomials), concretely, pictorially, and symbolically.

AN05 Students will be expected to demonstrate an understanding of common factors and trinomial factoring, concretely, pictorially, and symbolically.

Relations and Functions:

RF01 Students will be expected to interpret and explain the relationships among data, graphs, and situations.

RF02 Students will be expected to demonstrate an understanding of relations and functions.

RF03 Students will be expected to demonstrate an understanding of slope with respect to rise and run, line segments and lines, rate of change, parallel lines, and perpendicular lines.

RF04 Students will be expected to describe and represent linear relations, using words, ordered pairs, tables of values, graphs, and equations.

RF05 Students will be expected to determine the characteristics of the graphs of linear relations, including the intercepts, slope, domain, and range.

RF06 Students will be expected to relate linear relations to their graphs, expressed in • slope-intercept form ($y = mx + b$); • general form ($Ax + By + C = 0$); • slope-point form ($y - y_1 = m(x - x_1)$)

RF07 Students will be expected to determine the equation of a linear relation to solve problems, given a graph, a point and the slope, two points, and a point and the equation of a parallel or perpendicular line.

RF08 Students will be expected to solve problems that involve the distance between two points and the midpoint of a line segment.

RF09 Students will be expected to represent a linear function, using function notation.

RF10 Students will be expected to solve problems that involve systems of linear equations in two variables, graphically and algebraically.

Financial Mathematics:

FM01 Students will be expected to solve problems that involve unit pricing and currency exchange, using proportional reasoning.

FM02 Students will be expected to demonstrate an understanding of income to calculate gross pay and net pay, including wages, salary, contracts, commissions, and piecework.

FM03 Students will be expected to investigate personal budgets.

FM04 Students will be expected to explore and give a presentation on an area of interest that involves financial mathematics.