

- ✓ STUDENT STRENGTHS: M11.A.3, M11.B.3, M11.D.1, M11.D.3, M11.E.1, M11.E.3
- ✗ STUDENT WEAKNESSES: M11.A.2, M11.B.2, M11.C.3, M11.D.2, M11.D.4

[M11.A] NUMBERS & OPERATIONS Overall Score 69%

M11.A.1 67% [4/6] questions

- Find the square root of an integer to the nearest tenth using either a calculator or estimation.
- Express numbers and/or simplify expressions using scientific notation (including numbers less than 1).
- Simplify square roots.
- Find the Greatest Common Factor (GCF) and/or the Least Common Multiple (LCM) for sets of monomials.
- Locate/identify irrational numbers at the approximate location on a number line.
- Compare and/or order any real numbers (rational and irrational may be mixed).

M11.A.2 50% [2/4] questions

- Solve problems using operations with rational numbers including rates and percents (single and multi-step and multiple procedure operations) (e.g., distance, work and mixture problems, etc).
- Solve problems using direct and inverse proportions.
- Identify and/or use proportional relationships in problem solving settings.
- Simplify/evaluate expressions involving positive and negative exponents, roots and/or absolute value (may contain all types of real numbers - exponents should not exceed power of 10).
- Simplify/evaluate expressions involving multiplying with exponents, powers of powers and powers of products (positive exponents only).

M11.A.3 90% [9/10] questions

- Simplify/evaluate expressions using the order of operations to solve problems (any rational numbers may be used).
- Use estimation to solve problems.
- Solve problems involving addition

[M11.B] MEASUREMENT Overall Score: 56%

M11.B.2 33% [1/3] questions

- Measure and/or compare angles in degrees (up to 360°) (protractor must be provided or drawn).
- Calculate the surface area of prisms, cylinders, cones, pyramids and/or spheres. Formulas are provided on the reference sheet.
- Calculate the volume of prisms, cylinders, cones, pyramids and/or spheres. Formulas are provided on the reference sheet.
- Estimate area, perimeter or circumference of an irregular figure.
- Find the measurement of a missing length given the perimeter, circumference, area or volume.
- Describe how a change in the linear dimension of a figure affects its perimeter, circumference, area or volume. (1.) How does changing the length of the radius of a circle affect the circumference of the circle? (2.) How does changing the length of the edge of a cube affect the volume of the cube? (3.) How does changing the length of the base of a triangle affect the area of the triangle? * Note: [M11.B.1] Not assessed in Grade 11

M11.B.3 80% [8/10] questions

- Identify and/or use the properties of a radius, diameter and/or tangent of a circle (given numbers should be whole).
- Identify and/or use the properties of arcs, semicircles, inscribed angles and/or central angles.
- Identify and/or use properties of triangles (e.g., medians, altitudes, angle bisectors, side/angle relationships, Triangle Inequality Theorem).
- Identify and/or use properties of quadrilaterals (e.g., parallel sides, diagonals, bisectors, congruent sides/angles and supplementary angles).
- Identify and/or use properties of isosceles and equilateral triangles.
- Identify and/or use properties of congruent and similar polygons or solids.

[M11.C] GEOMETRY Overall Score 57%

M11.C.1 75% [9/12] questions

- Identify and/or use the properties of a radius, diameter and/or tangent of a circle (given numbers should be whole).
- Identify and/or use the properties of arcs, semicircles, inscribed angles and/or central angles.
- Identify and/or use properties of triangles (e.g., medians, altitudes, angle bisectors, side/angle relationships, Triangle Inequality Theorem).
- Identify and/or use properties of quadrilaterals (e.g., parallel sides, diagonals, bisectors, congruent sides/angles and supplementary angles).
- Identify and/or use properties of isosceles and equilateral triangles.

- Identify and/or use properties of congruent and similar polygons or solids.
- Find the measure of a side of a right triangle using the Pythagorean Theorem (Pythagorean Theorem included on the reference sheet).

M11.C.3 40% [2/5] questions

- Calculate the distance and/or midpoint between 2 points on a number line or on a coordinate plane (formula provided on the reference sheet).
- Relate slope to perpendicularity and/or parallelism (limit to linear algebraic expressions; slope formula provided on the reference sheet). * Note: [M11.C.2] Not assessed in Grade 11

[M11.D] ALGEBRAIC CONCEPTS Overall Score 62%

M11.D.1 80% [4/5] questions

- Analyze a set of data for the existence of a pattern and represent the pattern algebraically and/or graphically.
- Determine if a relation is a function given a set of points or a graph.
- Identify the domain, range or inverse of a relation (may be presented as ordered pairs or a table).
- Locate/identify irrational numbers at the approximate location on a number line.
- Compare and/or order any real numbers (rational and irrational may be mixed).

M11.D.2 43% [3/7] questions

- Solve compound inequalities and/or graph their solution sets on a number line (may include absolute value inequalities).
- Identify or graph functions, linear equations or linear inequalities on a coordinate plane.
- Write, solve and/or apply a linear equation (including problem situations).
- Write and/or solve systems of equations using graphing, substitution and/or elimination (limit systems to 2 equations).
- Solve quadratic equations using factoring (integers only – not including completing the square or the Quadratic Formula).
- Add, subtract and/or multiply polynomial expressions (express answers in simplest form – nothing larger than a binomial multiplied by a trinomial).
- Factor algebraic expressions, including difference of squares and trinomials (trinomials limited to the form ax^2+bx+c where a is not equal to 0).
- Simplify algebraic fractions.

M11.D.3 93% [13/14] questions

- Identify, describe and/or use constant or varying rates of change.
- Determine how a change in one variable relates to a change in a second variable (e.g., $y=4/x$, if x doubles, what happens to y ?).
- Apply the formula for the slope of a line to solve problems (formula given on reference sheet).
- Given the graph of the line, 2 points on the line, or the slope and a point on a line, write or identify the linear equation in point-slope, standard and/or slope-intercept form.
- Compute the slope and/or y-intercept represented by a linear equation or graph.

M11.D.4 33% [1/3] questions

- Match the graph of a given function to its table or equation.

[M11.E] DATA ANALYSIS | PROBABILITY Overall Score: 78%

M11.E.1 80% [4/5] questions

- Create and/or use appropriate graphical representations of data, including box-and-whisker plots, stem-and-leaf plots or scatter plots.
- Analyze data and/or answer questions based on displayed data (box-and-whisker plots, stem-and-leaf plots or scatter plots).

M11.E.2 66% [6/9] questions

- Calculate or select the appropriate measure of central tendency (mean, mode or median) of a set of data given or represented on a table, line plot or stem-and-leaf plot.
- Calculate and/or interpret the range, quartiles and interquartile range of data.
- Describe how outliers affect measures of central tendency.

M11.E.3 88% [7/8] questions

- Simplify/evaluate expressions using the order of operations to solve problems (any rational numbers may be used).
- Use estimation to solve problems.
- Solve problems involving addition.

Numbers & Operations 23% of PSSA	Measurement 15% of PSSA	Geometry 18% of PSSA	Algebraic Concepts 25% of PSSA	Data Analysis/Probability 19% of PSSA
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Student Strengths and Weaknesses determined by overall performance in eligible content areas. Strengths are areas which the student scored 80% and above, weaknesses are scored below 65%.

a	b	c	d	e	(a.) 0 - 34.9%	(b.) 35.0 - 62.9%	(c.) 63.0 - 74.9%	(d.) 75.0 - 87.9%	(e.) 88.0 - 100%
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