Outline and Review for the Midterm Exam

Math 10D: *Theory and Application, Building for the Future, Connecting Algebra to Geometry*

✔ The exam will be worth 15% of the final mark.

✔ The formula sheet below will be supplied on the Midterm Exam

✔ Here is a topic guide for you. [Note: You have been given a study guide. Though they represent an excellent and thorough review, they do not make up a full review. Other sources for good problems and review are homework, tests, quizzes, and class notes.]

Key Areas for Linear Systems and Coordinate & Analytic Geometry

1. Solving a linear system using graphing, calculator, substitution and/or elimination. May require a well-labelled sketch.
2. Solving problems using linear systems (SOLEs): money problems, mixture problems, and distance-speed-time problems.
3. Sketching and labelling a circle given its equation and labelling a number of its "parts".
4. Determining a circle's equation given a sketch or its centre and radius.
5. Using formulas to determine characteristics of triangles and quadrilaterals. These formulas include: midpoint, distance between two points, length of a line segment, slope, as well as the line equations (3 types). Characteristics include classification of triangles by side lengths (scalene, isosceles, equilateral) or angles (acute, right, obtuse) and types of quadrilaterals (square, rectangle, parallelogram, rhombus, kite, trapezoid).

Textbook Review: pg 62-63: 5, 6, 7, 12, 13, 14, 16; pg 124-125: 2, 3, 6, 8, 10, 12, 14, 16.

Key Areas for Similarity and Trigonometry

1. Solving a right triangle [using proper form].
2. Solving a non-right triangle [using proper form].
3. Proving triangles are congruent or similar using one of the memorized theorems SAS, SSS, ASA, SAS~, SSS~ or AA~.
4. Solving similar triangles problems [make sure to include the proof part].
5. Solving trig problems using the Sine Law and/or Cosine Law. (Remember angle of elevation and angle of depression.)

Textbook Review: pg 416-417: 2, 4, 8, 9, 11; pg 453: 3, 4, 6, 7, 8, 9, 11.