



**Text:** Foundations of Mathematics 10, McGraw-Hill Ryerson    **Replacement Value:** \$70.00    **Assigned Text #:**

**Workbook:** TIPS4RM Red Student Workbook (used every day!)

Copy of workbook available at: <http://www.edu.gov.on.ca/eng/studentsuccess/lms/tips4rm.html>

### **COURSE DESCRIPTION:**

This course enables students to consolidate their understanding of linear relations and extend their problem-solving and algebraic skills through investigation, the effective use of technology, and hands-on activities. Students will develop and graph equations in analytic geometry; solve and apply linear systems, using real-life examples; and explore and interpret graphs of quadratic relations. Students will investigate similar triangles, the trigonometry of right triangles, and the measurement of three-dimensional figures. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

The entire curriculum document is available from: <http://www.edu.gov.on.ca/eng/curriculum/secondary/math.html>

### **TOPICS OF STUDY AND ESSENTIAL OUTCOMES:**

To earn this credit, the student must clearly demonstrate **ALL** bulleted Essential Outcomes:

#### **Measurement & Trigonometry**

- Solve equations and word problems using similar triangles, proportions and the Pythagorean Theorem
- Correctly choose the correction trigonometric ratio to solve a triangle
- Convert between imperial and metric measurements
- Calculate the surface area and volume of shapes

#### **Modeling Linear Relations**

- Graph a line and determine the equation of line given information
- Solve equations, word problems and systems of equations by:
  - Algebraic manipulation
  - Graphing

#### **Quadratics Relations**

- Expand and factor second degree relations
- Understand the characteristics of quadratic relations
- Graph quadratic relations in either factored or standard form
- Solve word problems using quadratic equations and graphs

#### **General Essential Outcomes**

- Possess basic computational, measurement and graphing skills
- Introduce and use variables in problem solving
- Use technology correctly to assist in solutions

## ASSESSMENT AND EVALUATION:

Category	Weight
<b>Knowledge/Understanding:</b> Subject specific content acquired in the course, and the comprehension of its meaning and significance. <ul style="list-style-type: none"> <li>• Evaluation in this category may include, but is not limited to, quizzes, tests, in-class question and answer, group work, presentations, and problem assignment.</li> </ul>	25%
<b>Application:</b> The use of knowledge and skills to make connections within and between various contexts. <ul style="list-style-type: none"> <li>• Evaluation in this category may include, but is not limited to, tests, in-class problems, and take-home projects.</li> </ul>	25%
<b>Thinking:</b> The use of critical and creative thinking skills and/or processes. <ul style="list-style-type: none"> <li>• Evaluation in this category will derive primarily from in-class “TIPS” assignments but may also include critical analysis questions, extended answer problems, etc. which may or may not be part of a test.</li> </ul>	10%
<b>Communication:</b> The conveying of meaning through various forms. <ul style="list-style-type: none"> <li>• Evaluation in this category may include, but is not limited to, the proper use of mathematical symbols and terminology, the presentation format of solutions on tests, oral and/or written presentations, and explanations of mathematical theorems, problem solutions and concepts.</li> </ul>	10%
<b>Summative – Board-wide Exam and Summative</b> <ul style="list-style-type: none"> <li>• Performance Assessment Task</li> <li>• Final Examination</li> </ul>	30%

DISTANCE/LENGTH	VOLUME/CAPACITY	WEIGHT/MASS
1 foot = 12 inches 1 yard = 3 feet 1 mile = 5280 feet 1 mile $\approx$ 1.61 kilometres 1 inch = 2.54 cm 1 foot = 0.3048 meters 1 metre = 1000 millimetres 1 metre = 100 centimeters 1 kilometre = 1,000 meters 1 kilometer $\approx$ 0.62 miles	1 cup = 8 fluid ounces 1 quart = 4 cups 1 gallon = 4 quarts 1 gallon = 231 cubic inches 1 litre $\approx$ 0.264 gallons 1 cubic foot = 1,728 cubic feet 1 cubic yard = 27 cubic feet 1 board foot = 1 inch by 12 inches by 12 inches	1 ounce $\approx$ 28.350 grams 1 pound = 16 ounces 1 pound $\approx$ 453.592 grams 1 milligram = 0.001 grams 1 kilogram = 1,000 grams 1 kilogram $\approx$ 2.2 pounds 1 ton = 2,000 pounds

## STUDENT EXPECTATIONS:

Regular attendance is an integral part of learning and assessment; irregular attendance will hinder a student's ability to earn a credit.

Students are responsible for all material studied in class including work missed due to illness, field trips and other excused absences.

Assignments - After the window of opportunity, and final due date have passed, a contract may be entered with the teacher and/or 2% per school day up to a maximum of ten percent will be deducted. Once the teacher has returned evaluated assignments, a mark of "0" will normally be assigned.

Tests - All students shall write tests on the scheduled dates and at the scheduled times. Students who are aware of a necessary absence from school on a scheduled test day are responsible for discussing this with their teacher as far in advance as possible. Students with excused absences are responsible for scheduling their make-up evaluation immediately upon return to the school. Students may receive a mark of "0" in the event of an unexcused absence.

Presentations - Time-sensitive presentations will follow the same guidelines as tests. Non-time-sensitive presentations will follow the same guidelines as assignments.

Summative Tasks - A student who has an excused absence during a summative evaluation and cannot arrange to complete the summative will have the percent missed added to the weighting of the final examination. Students will receive a mark of "0" in the event of an unexcused absence.

Exams - All students must write the exam at the scheduled time. In the case of an unexcused absence, the student will receive a mark of "0" for the exam and receipt of the credit may be in jeopardy. In order to be excused, absences must be cleared through the Administration.

I, \_\_\_\_\_, *have read and understand the Mathematics Department Policies.*  
PRINT STUDENT NAME NEATLY

\_\_\_\_\_  
*Student Signature*

\_\_\_\_\_  
*Parent/Guardian Signature*

\_\_\_\_\_  
*Date*

