Math 10C Course Outline

Room 182
Monday – Thursday (2:00 – 3:30)
Friday (12:12 -1:16)
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Resources
- Absolute Value Publication “Foundation of Mathematics & Pre-Calculus Grade 10 Workbook”
- McGraw-Hill Ryerson “Mathematics 10”

Required Materials
- Coloured Pens (Red, black, blue, and/or others)
- Pencils, sharpeners, and erasers.
- Binder or ‘accordion style file folder tote’ for handouts, worksheets, etc.
- Graphing Calculator*
  Texas Instruments: "TI-83 Plus" OR "TI 84" OR "TI 84 Plus" Graphing Calculator.

  *Please DO NOT purchase a different model or brand (no matter how "cool" or "advanced" they may look. More expensive does NOT mean "better") I emphasize this because I don't want anyone to 'over spend' unnecessarily. All our resources are based around Texas Instruments 83 and 84 models. Also, this calculator will be used for all high school math "dash 1 and dash 2" courses. I still have my original graphing calculator from high school, so they are definitely "worth it".

Student Expectations
- Students are expected to:
  - Follow classroom rules.
  - Be accountable for their actions.
  - Use appropriate, respectful language.
  - Work cooperatively with their classmates.
  - Attend all classes on time and arrive prepared.
  - Dress appropriately and in compliance with the dress code.
  - Spend additional time outside of the classroom practicing math concepts.

*Alberta Education has restrictions on the use of certain graphing calculators. Please refer to the link for more information
http://www.education.alberta.ca/media/3742235/06-dip-gib-2010-11_using%20calculators%20computers.pdf
Assessment
You may be assessed through a variety of, but not limited to, the following:

- Assignments
- Projects
- Quizzes
- Labs
- Portfolios
- Journals
- U Exams
- Final Exam

Planning Ahead

![Diagram showing course sequence from K to 9, Mathematics 10C (combined course), Mathematics 20-1, Mathematics 30-1, Mathematics 20-2, Mathematics 30-2, Mathematics 20-3, Mathematics 30-3, and three course sequences: “-1”, “-2”, and “-3”]

Weightings

- Final Exam* ......................................... 30%
- Measurement....................................... 15%
- Algebra & Number .............................. 20%
- Relations & Functions Part I ............ 35%

*or 100% weighting if students perform better on the final exam than their earned course grade.

Stay in the Loop

I update student progress frequently using PowerSchool Gradebook. Students and parents can track student progress by logging onto their PowerSchool account. The office will have provided you with your login information. Go to [www.lrsd.ca](http://www.lrsd.ca) and click the link “PowerSchool Public Access” on the bottom right hand of the page. Or follow this link [https://lrsd.powerschool.com/public/home.html](https://lrsd.powerschool.com/public/home.html)

I look forward to working with you. Please do not hesitate to ask for extra help outside of the classroom.

Here’s to a great school year!

-Mrs. Duncan
Math 10C Specific Outcomes

Measurement (15%)

10C-M1 Linear Measurement – Solve problems that involve linear measurement, using:
   • SI and imperial units of measure
   • estimation strategies
   • measurement strategies.

10C-M2 Measurement Conversions – Apply proportional reasoning to problems that involve conversions between SI and imperial units of measure.

10C-M3 Surface Area and Volume – Solve problems, using SI and imperial units, that involve the surface area and volume of 3D objects, including:
   • right cones
   • right cylinders
   • right prisms
   • right pyramids
   • spheres.

10C-M4 Right Triangle Trigonometry – Develop and apply the primary trigonometric ratios (sine, cosine, tangent) to solve problems that involve right triangles.

Algebra and Number (20%)

10C-AN1 Factors – Demonstrate an understanding of factors of whole numbers by determining the:
   • prime factors
   • greatest common factor
   • least common multiple
   • square root
   • cube root

10C-AN2 Irrational Numbers – Demonstrate an understanding of irrational numbers by:
   • representing, identifying, and simplifying irrational numbers
   • ordering irrational numbers.

10C-AN3 Powers and Rational Exponents – Demonstrate an understanding of powers with integral and rational exponents.

10C-AN4 Polynomial Multiplication – Demonstrate an understanding of the multiplication of polynomial expressions (limited to monomials, binomials, and trinomials) concretely, pictorially, and symbolically.

10C-AN5 Factoring – Demonstrate an understanding of common factors and trinomial factoring, concretely, pictorially, and symbolically.
Relations and Functions (35%)

10C-RF1 Graphs – Interpret and explain the relationships among data, graphs, and situations.

10C-RF2 Relations and Functions – Demonstrate an understanding of relations and functions.

10C-RF3 Slope – Demonstrate an understanding of slope with respect to:
- rise and run
- line segments and lines
- rate of change
- parallel lines
- perpendicular lines.

10C-RF4 Representing Linear Relations – Describe and represent linear relations, using:
- words
- ordered pairs
- tables of values
- graphs
- equations.

10C-RF5 Graphs of Linear Relations – Determine the characteristics of the graphs of linear relations, including the:
- intercepts
- slope
- domain
- range.

10C-RF6 Forms of Equations – Relate linear relations expressed in the following forms to their graphs:
- slope-intercept form \( y = mx + b \)
- general form \( Ax + By + C = 0 \)
- slope-point form \( y - y_1 = m(x - x_1) \).

10C-RF7 Equations of Linear Relations – Determine the equation of a relation to solve problems, given:
- a graph
- a point and the slope
- two points
- a point and the equation of a parallel or perpendicular line.

10C-RF8 Function Notation – Represent a linear function, using function notation.

10C-RF9 Solving Systems of Equations – Solve problems that involve linear equations in two variables, graphically and algebraically.