



# Grade 8 Math

Course Code: 0080

Credit Value: none

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**Prerequisites:** none, although successful completion of K-7 math courses are strongly encouraged.

**Required Materials and Recommended Resources:**

Required: binder, pencils, eraser, lined paper, basic scientific calculator (students will NOT be allowed to use their device as a calculator)

Textbook (provided): MathLinks 8 (McAskill et. At.; McGraw-Hill Ryerson, 2008)

Other resources to be used as supplementary material

**Course Description and Purpose**

Grade 8 is designed to give students the skills required to move forward into Grade 9 math. The content of this course encourages the development of abstract mathematical thought processes needed for higher level math.

**Goals of Course**

The main goals of mathematics education are to prepare students to

- communicate and reason mathematically
- use mathematics confidently, accurately, and efficiently to solve problems
- appreciate and value mathematics
- make connections between mathematical knowledge and skills and their applications
- commit themselves to lifelong learning
- become mathematically literate citizens, using mathematics to contribute to society and to think critically about the world

**Summary of Four Main Topics**

Number Sense: develop number sense

Patterns and Relations: use patterns to describe the world and solve problems

Shape and Space: use direct or indirect measurements to solve problems

Statistics and Probability: collect, display, and analyze data to solve problems

## Special Programming

**Spiral Planning**

Grade 8 math will follow a spiral curriculum. A spiral curriculum allows for units of study to be spread out throughout the school year, rather than ending once a chapter has been completed. This will provide students with opportunities to review taught content, and also improve their academic standing within that curricular area.

**mRLC**

Turtle River School Division is part of the Manitoba Rural Learning Consortium (mRLC). The purpose of being part of this team is to improve and track student understanding and ability of mathematic knowledge in various grades. The mRLC has developed a pacing guide with the essential outcomes taught between September and the end of January, and the other outcomes are covered later in the year. To help track student understanding of the material, there are 4 quizzes that students are asked to write. All four quizzes are based on the essential outcomes, and are meant to give students and the teacher a better understanding of what needs more review. In June, students are asked to write a Baseline Assessment, where the results are recorded by the division. *All parents/guardians have the option to allow their students to opt out of this baseline assessment.* This baseline and the quizzes will not count toward student grades.



Schedule	Topics covered
<b>September</b>	
<ul style="list-style-type: none"> <li>Review of Grade 7 Concepts</li> </ul>	
<ul style="list-style-type: none"> <li>Chapter 8: Integers</li> </ul>	Exploring Integer Multiplication; Multiplying Integers; Exploring Integer Division; Dividing Integers; Applying Integer Operations
<ul style="list-style-type: none"> <li>Chapter 6: Fraction Operations</li> </ul>	Multiplying a Fraction and a Whole Number; Dividing a Fraction by a Whole Number; Multiplying Proper Fractions; Multiplying Improper Fractions and Mixed Numbers; Dividing Fractions and Mixed Numbers; Applying Fraction Operations
<b>October</b>	
<ul style="list-style-type: none"> <li>Complete Chapter 6</li> </ul>	
<b>November</b>	
<ul style="list-style-type: none"> <li>Chapter 9: Linear Relations</li> </ul>	Analyzing Graphs of Linear Relations; Patterns in a Table of Values; Linear Relationships
<ul style="list-style-type: none"> <li>Chapter 10: Solving Linear Equations</li> </ul>	Modelling and Solving One-Step Equations; Modelling and Solving Two-Step Equations with Division; Modelling and Solving Two-Step Equations with Multiplication; Modelling and Solving Two-Step Equations with Brackets
<b>December</b>	
<ul style="list-style-type: none"> <li>Chapter 3: Pythagorean Relationship</li> </ul>	Squares and Square Roots; Exploring the Pythagorean Relationship; Estimating Square Roots; Using the Pythagorean Relationship; Applying the Pythagorean Relationship)
<b>January</b>	
<ul style="list-style-type: none"> <li>Chapter 2: Ratios, Rates, and Proportional Reasoning</li> </ul>	Two-Term and Three-Term Ratios; Rates; Proportional Reasoning)
<ul style="list-style-type: none"> <li>Chapter 5: Surface Area</li> </ul>	Views of 3-D Objects; Nets of 3-D Objects; Surface Area of a Prism; Surface Area of a Cylinder)
<b>February</b>	
<ul style="list-style-type: none"> <li>Complete Chapter 5</li> </ul>	
<ul style="list-style-type: none"> <li>Chapter 7: Volume</li> </ul>	Understanding Volume; Volume of a Prism; Volume of a Cylinder; Solving Problems Involving Prisms and Cylinders
<ul style="list-style-type: none"> <li>1<sup>st</sup> mRLC Quiz</li> </ul>	
<b>March</b>	
<ul style="list-style-type: none"> <li>Chapter 4: Understanding Percent</li> </ul>	Representing Percents; Fractions, Decimals, and Percents; Percent of a Number; Combining Percents
<ul style="list-style-type: none"> <li>2<sup>nd</sup> mRLC Quiz</li> </ul>	
<b>April</b>	
<ul style="list-style-type: none"> <li>Chapter 1: Representing Data</li> </ul>	Advantages and Disadvantages of Different Graphs; Misrepresenting Data; Critiquing Data Presentation)
<ul style="list-style-type: none"> <li>3<sup>rd</sup> mRLC Quiz</li> </ul>	
<b>May</b>	
<ul style="list-style-type: none"> <li>Chapter 11: Probability</li> </ul>	Determining Probabilities Using Tree Diagrams and Tables; Outcomes of Independent Events; Determining Probabilities Using Fractions
<ul style="list-style-type: none"> <li>Chapter 12: Tessellations</li> </ul>	Exploring Tessellations with Regular and Irregular Polygons; Constructing Tessellations Using Translations and Reflections; Constructing Tessellations using Rotations; Creating Escher-Style Tessellations
<ul style="list-style-type: none"> <li>4<sup>th</sup> mRLC Quiz</li> </ul>	
<b>June</b>	
<ul style="list-style-type: none"> <li>Review and Baseline Assessment</li> </ul>	



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## Assessment

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### Student Evaluation

Formative Assessments:

- “Warm-up” assignments
- “Show you know” questions
- Spiral curriculum work
- mRLC Check-Ins, Quizzes & Baseline Assessment

Summative Assessments:

- Chapter Assignments
- Chapter Tests

### Breakdown of Marks

Coursework (tests & assignments): 100%

Coursework will be marked using a key based on final answers and work shown.

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## Guidelines

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### Homework Policy

Homework will be assigned if/when:

- Students are not able to complete their assignments during class.
- Students are absent.

### Incomplete Work

- Following the deadline of any assignment, the student’s mark will be recorded as a zero. Upon completion of the assignment, it will be graded and recorded. At reporting periods, a final deadline will be given for the evaluations to take effect on the report card for that reporting period.

### Extra Help

- If students need extra help, your teacher is available at lunch hour. Appointments can also be made for the morning or afterschool.

### Plagiarism

“Students must understand that the tests/exams they complete and the assignments they submit as evidence of learning must be their own work and that cheating and plagiarism will not be tolerated...” (*Provincial Assessment Policy, K-12*)

“Academic dishonesty could result in one or all of the following: contacting the parents, documentation of the incident in the student’s file, report this behavior on the report card, enforce loss of privileges for the student, disciplinary measures, redo the work and deduct marks for academic dishonesty.... If a student is found to be engaging in academic dishonesty, the principal will follow the school and division policy which may result in further consequences as deemed appropriate by the principal.” (*TRSD Instructional policy manual*)

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## Classroom Expectations

- Attendance and Absence
  - Students are expected to attend class regularly.
  - Students who arrive in class 5 minutes after the bell or later will be marked as LATE
  - Students who arrive with 15 minutes or less left in class will be marked as absent
  - Students who are absent for class are responsible for gathering missed work and asking questions. Notes for missed work will be available upon request
- All members of the classroom community are expected to be polite and respectful to all staff, students, and property in the classroom.
- Use of Personal Devices
  - Devices and accessories must be turned off and put out of sight during teacher instruction.
  - If students cannot comply with the technology expectations, their device will be placed in a safe location until the end of class.