

LINCOLN PUBLIC SCHOOLS
Mathematics Learning Expectations: Grade 7

**Massachusetts
Standards**

The 2011 Massachusetts Curriculum Framework for Mathematics incorporates the common core standards and a select number of additional standards unique to Massachusetts.

**Critical Areas for
Instructional Focus:**

- Proportional relationships
- Linear equations and operations with rational numbers
- 2- and 3-dimensional geometric topics
- Representative samples and data distributions

*See 2011
Massachusetts
Curriculum
Frameworks for
Mathematics:
Grade 7 Introduction
for more detail.*

Content Domains and Key Outcomes

Ratios and Proportional Relationships

- Analyze proportional relationships and use them to solve real-world and mathematical problems

The Number System

- Apply and extend previous understandings of operations with fractions to add, subtract, multiply and divide rational numbers, including negative integers

Expression and Equations

- Use properties of operations to generate equivalent expressions
- Solve real-life and mathematical problems using numerical and algebraic expressions and equations

Geometry

- Draw, construct and describe geometrical figures, and describe the relationships between them
- Solve real-life and mathematical problems involving angle measure, area, surface area and volume

Statistics and Probability

- Use random sampling to draw inferences about a population
- Draw informal comparative inferences about two populations
- Investigate chance processes and develop, use and evaluate probability models

See 2011 Massachusetts Curriculum Frameworks for Mathematics: Grade 7 for more detail.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.

5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

*See 2011 Massachusetts Curriculum Frameworks for Mathematics:
pp.15-17 for more detail on the use of these standards in all domains.*