

The Common Denominator
A Family Math Newsletter
Mathematics 6 GT Unit 10: Linear Equations and Inequalities

Unit at a Glance:

Suggested Length of Unit: 14 days (45 minutes), 7 days (90 minutes)

- Finding Solutions Using Graphs
- Solving $ax + b = cx + d$
- Graphing $y < ax + b$
- Solving $ax + b < cx + d$
- Linear Combinations
- Graphing $Ax + By = C$ and $Ax + B < C$
- Time-Distance Graphs
- Graphs of Formulas

Resources

- Textbook Resource: Viktora, Steven S, et al. Transition Mathematics. Wright Group/McGraw-Hill, 2008, pp. 614-671.
- Homework Help/Online book (teacher-provided code needed): [Online Textbook Portal](#)

Exploring Chapter 10

A generation ago, the content presented in this chapter was seldom found in courses prior to first-year algebra, but it is now considered an important introduction. The approach here differs from some approaches you may have seen—graphing lines before solving linear equations. Graphing provides a picture of what is meant by solving and gives students who are not yet proficient with symbols another way to solve equations.

Lesson 10-1 introduces situations leading to equations with variables on both sides and uses graphing to find solutions to those equations. Lesson 10-2 gives the standard algorithm for solving a linear equation. Students will continue to use the properties to prove solutions to equations; algebraic proofs which will build a foundation for geometric proofs. Lessons 10-3 and 10-4 apply the same ideas to linear inequalities. Lessons 10-5 and 10-6 deal with the linear combination situations leading to expressions of the form $Ax + By = C$. More graphing is done in Lessons 10-7 and 10-8 to extend the ideas introduced earlier in the chapter. Students have been using the graphing calculator all year and will continue its use in this chapter.

Quote

“It’s fine to work on any problem, so long as it generates interesting mathematics along the way—even if you don’t solve it at the end of the day.” -Andrew Wiles