



Basic Algebra – Unit 11: Word Problems and Systems of Equations

Study Guide

Text: Introductory Technical Mathematics, 6th Edition, Chapters 14 and 17

Note: Do “Odd” numbered problems only

1. Review course structure.
2. Re-read Unit 1.6: Pages 9-10: Solving Word Problems.
3. Review How to Set up Word Problems found at: <https://www.khanacademy.org/math/algebra-basics/core-algebra-linear-equations-inequalities/ratios-core-algebra/v/writing-proportions>
=====
4. Review course structure for Unit 14 – Simple Equations.
5. Read Chapter 3 of PDF entitled, “Understanding Algebra,” found at: <http://florida.theorange grove.org/og/file/66b477dc-7824-fa97-6bf9-2afd81af94f4/1/Understanding%20Algebra.pdf>
6. Read Units 14.1 to 14.3: pages 361-364: Expressions of Equality, Equations from Word Statements and Checking the Equation.
7. Do Exercises 14.3: pages 364-365: # 1-27 for practice.
8. Read Units 14.4 to 14.5: pages 366-368: Principles of Equality and Solutions by Subtraction Principle.
9. Do Exercises 14.5: pages 368-369: # 1-25 and # 31-45 for practice.
10. Read Unit 14.6: page 369-370: Solutions by Addition Principle.
11. Do Exercises 14.6: pages 370-372: # 1-19 and # 31-41 for practice.
12. Read Unit 14.7: pages 372-373: Solutions by Division Principle.
13. Do Exercises 14.7: pages 373-374: # 1-19 and # 31-41 for practice.
14. Read Unit 14.8: pages 374-375: Solutions by Multiplication Principle.





Basic Algebra – Unit 11: Word Problems and Systems of Equations

Study Guide

Text: Introductory Technical Mathematics, 6th Edition, Chapters 14 and 17

15. Do Exercises 14.8: pages 375-377: # 1-19 and # 31-41 for practice.

16. Read Unit 14.9: pages 377-378: Solutions by Root Principle.

17. Do Exercises 14.9: page 378: # 1-31 for practice.

18. Read Unit 14.10: pages 379-380: Solutions by Power Principle.

19. Do Exercises 14.10: page 380: # 1-29 for practice.

=====

20. Review course structure for Unit 17: Systems of Equations.

21. Read Unit 17.1: pages 408-409: Graphical Method of Solving Systems of Equations.

22. Complete Setting Up Systems of Equations exercises found at:

<https://www.khanacademy.org/math/algebra-basics/core-algebra-systems/core-algebra-systems-word-problems/v/algebraic-word-problem>

23. Do Exercises 17.1: pages 409-410: # 1-17 for practice.

24. Read Unit 17.2: pages 410-411: Substitution Method of Solving Systems of Equations.

25. Do Exercises 17.2: page 411: # 1-23 for practice.

26. Read Unit 17.3: pages 411-414: Addition or Subtraction Method of Solving Systems of Equations.

27. Do Exercises 17.3A: page 413: # 1-17 for practice.

28. Do Exercises 17.3B: page 415: # 1-21 for practice.

29. Read Unit 17.4: pages 415-416: Types of Systems of Equations.

30. Do Exercises 17.4: page 416: # 1-15 for practice.





Basic Algebra – Unit 11: Word Problems and Systems of Equations

Study Guide

Text: Introductory Technical Mathematics, 6th Edition, Chapters 14 and 17

31. Read Unit 17.7: pages 418-422: Writing and Solving Systems of Equations from Word Problems, Number Problems and Practical Applications.
32. Do Exercises 17.7: pages 422-424: # 1-23 for practice.
33. Complete exercises on How to Set up “Percent” Problems found at:
<https://www.khanacademy.org/math/pre-algebra/decimals-pre-alg/percent-word-probs-pre-alg/v/solving-percent-problems>
34. Complete Setting up Two Step Inequality Word Problems found at:
<https://www.khanacademy.org/math/algebra/one-variable-linear-inequalities/alg1-two-step-inequalities/v/writing-and-using-inequalities-3>
35. You are now ready to complete the final exam/lab (to be completed in lab). See lab instructor.





Basic Algebra – Unit 11: Word Problems and Systems of Equations

Study Guide

Text: Introductory Technical Mathematics, 6th Edition, Chapters 14 and 17

SAFETY DISCLAIMER:

M-SAMC educational resources are in no way meant to be a substitute for occupational safety and health standards. No guarantee is made to resource thoroughness, statutory or regulatory compliance, and related media may depict situations that are not in compliance with OSHA and other safety requirements. It is the responsibility of educators/employers and their students/employees, or anybody using our resources, to comply fully with all pertinent OSHA, and any other, rules and regulations in any jurisdiction in which they learn/work. M-SAMC will not be liable for any damages or other claims and demands arising out of the use of these educational resources. By using these resources, the user releases the Multi-State Advanced Manufacturing Consortium and participating educational institutions and their respective Boards, individual trustees, employees, contractors, and sub-contractors from any liability for injuries resulting from the use of the educational resources.

DOL DISCLAIMER:

This product was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.

RELEVANCY REMINDER:

M-SAMC resources reflect a shared understanding of grant partners at the time of development. In keeping with our industry and college partner requirements, our products are continuously improved. Updated versions of our work can be found here: <http://www.msamc.org/resources.html>.

