

MATH 70 TEST 1
SECTIONS 1.1–2.7 of Bittinger

STUDY GUIDE

Here are the topics we have covered in sections 1.1 through 2.7:

1. Translating written statements into mathematical expressions and equations
2. Understanding and using properties (commutative, associative, distributive, etc.)
3. Factor (which is one use of the distributive property)
4. Being able to add, subtract, multiply and divide with fractions (positive or negative!)
5. Being able to add, subtract, multiply and divide with all real numbers.
6. Determining where an irrational number (like $\sqrt{19}$) falls on the number line
7. Finding absolute values, opposites and reciprocals
8. Combining like terms to simplify expressions
9. Using the order of operations (aka PEMDAS) accurately
10. Evaluating numerical expressions
11. Identifying bases and using exponents (including on negative numbers)
12. Determining when two fractions involving a negative sign are equal
13. Solving linear equations and also determining when an equation is an identity or a contradiction
14. Solving a formula for a given variable (This is also known as solving a “literal equation.”)
15. Solving problems involving percent
16. Solving word problems of many types (translation, consecutive integer, angle, inequality, etc.)
17. Solving inequalities and using the number line, set-builder notation, and interval notation

Please see other side/next page for further comments on the test.

FURTHER COMMENTS:

I consider the three most important things we have studied so far to be **simplifying expressions** (i.e. using PEMDAS), **solving equations**, and doing **word problems**, so those will make up most of the test, and that is where I would encourage you to focus most of your time in studying.

Expect there to be a few questions about the properties, so know what those are and how they work - even in tricky settings. Remember how we talked about what the words “commute” and “associate” mean. Also expect a number of questions to involve fractions. I want to point this out explicitly because I’ve seen this be a struggle as we’ve worked in class and as we’ve taken quizzes. If you are struggling with fractions make sure to really brush up on them before the test - knowing when you can and cannot “cross cancel,” knowing when you need a common denominator and when you do not, knowing how to build and reduce fractions, and so on.

A really good tool for practicing is to use my old test 1 that is attached at the bottom of my “study guide” web-page. The good news is that the test you take will be shorter than that old practice test! Skip the problems having to do with graphing on a grid. (But do remember to know your properties, and these do not show up on the old tests.)

I hope this study guide does help you to guide your study! All the best to you as you prepare and as you take the test!