

MATH 152A/AA REVIEW FOR EXAM #1
Chapter 1, Sections 2.1~2.5, & 2.8

I. THEORY & DEFINITIONS

A) Define each group of numbers:

1) Integers

2) Natural Numbers

3) Real Numbers

4) Given the set of numbers $\left\{0, -7, 2.8, \frac{3}{5}, \frac{12}{6}, \sqrt{2}, \sqrt{49}\right\}$. Which of these

numbers are:

a) Whole numbers?

b) Integers?

c) Real numbers?

B) What is meant by the absolute value of a number?

C) What operations with fractions require finding a common denominator (preferably the LEAST common denominator)?

D) What operation(s) with fractions allows you to “reduce in advance” (also known as cross canceling)?

E) Write a rule for subtracting two numbers.

F) Write a rule for determining the sign of the answer in a multiplication or division problem.

G) Which of the following problems is undefined and why?

(1) $\frac{3}{0}$

(2) $\frac{0}{3}$

H) Explain the difference between $(-0.8)^2$ and -0.8^2 .

I) Use the order of operations to simplify the following problems:

1) $3 + 4(-5) - 2^3$

2) $\frac{5[-12 - 2(-3)^2]}{-4 - 6 - 2}$

J) Give an **example** of the:

1) Commutative Property of Multiplication

2) Associative Property of Addition

3) Distributive Property

4) The Additive Identity

5) The Multiplicative Inverse

K) State the Golden Rule of Equation Solving.

L) State the Sivler Rule of Solving Inequalities.

M) Solve the following:

1) $x + 2(x + 4) = 3(x + 3) - 7$

2) $\frac{5}{6}y + 1 = \frac{1}{4}y - 3$

3) $0.2x - 0.05(x - 100) = 35$

4) $23 - 5(3 - n) = -4(n - 2) + 9n$

N) State the definitions of simple inequality and compound inequality and give two examples of a compound inequality.

II. PROBLEMS

A) Find 4 consecutive even integers whose sum is 100.

B) For a linear inequality, be able to solve it, graph its solution, and use interval notation to write its solution.

1) Solve $9 - 4(m + 1) > 4m + 7$

2) Solve $-1 \leq 2x - 3 < 5$

III. An excellent source of practice problems are:

A) The problems which you did for homework. Check those you did wrong. You can print them from MyMathLab

B) Quiz #1, Quiz #2, & Notes