

Alg. 1 Sem. Exam Study Guide

Evaluating Expressions

Explain the process for evaluating expressions for a given value and give two different examples (be sure one includes exponents)

Ex.1

Ex. 2

Order of Operations

Write out and explain the rules for the Order of Operations.

Properties

Using a,b & c write an example of each of the following properties:

Inverse

Associative

Commutative

Distributive

Identity

Real Numbers

State the rule for each of the following and give at least two different examples.

Adding Real Numbers:

Ex. 1

Ex. 2

Subtracting Real Numbers:

Ex. 1

Ex. 2

Multiplying Real Numbers:

Ex. 1

Ex. 2

Dividing Real Number:

Ex. 1

Ex. 2

Matrices

What are the rules for adding & subtracting matrices. Give an example of each.

Ex. 1

Ex. 2

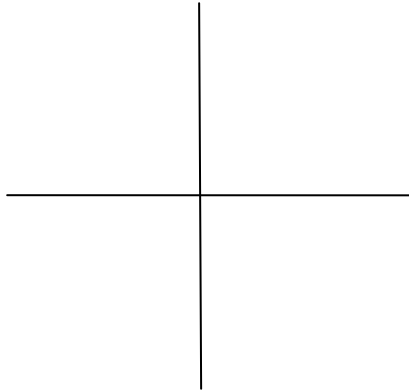
Coordinate Plane

On the coordinate plane below label the following:

a) x-axis

b) y-axis

c) quadrants



Solving Equations

Write general directions for solving linear equations. Find at least 3 different examples in your book and solve them writing an explanation for each step. (See Ex. 3.3 on p. 190)

Directions:

Ex. 1

Ex. 2

Ex. 3

What is the general formula we use to solve percent problems?

Graphing Lines

What are the three methods we learned to graph a line?

Method 1:

Method 2:

Method 3:

What does the graph of a *horizontal* line look like? What does the equation look like?

What does the graph of a *vertical* line look like? What does the equation look like?

What is the formula for finding slope (m)?

What is the formula(model) for *direct variation*? Find and do an example from the book.

Formula:

Ex.

Explain in your own words how you can tell if a relation is a function. Give an example of a relation that *is* a function and an example of a relation that *is not* a function.

Explanation:

Ex. (is a function)

Ex. (is not a function)

Writing Equations of Lines

Slope-Intercept Form:

Point-Slope Form:

Standard Form:

Parallel lines have _____ slope.

Perpendicular lines have _____ slope.

Inequalities

< _____ > _____

Describe in your own words, the process for solving inequalities. Find at least 3 different examples in your book and solve the problems giving an explanation for each step.

Process:

Ex. 1

Ex. 2

Ex. 3

What is the formula for solving *absolute value equations*? Find at least two examples in your book and write out the solutions with explanations.

Formula:

Ex. 1

Ex. 2

What is the formula for solving *absolute value inequalities*. (p. 354) and find at least two examples in your book and write out the solutions with explanations.

Formula:

Ex. 1

Ex. 2

Copy the steps from p. 360 in your book on how to graph a *linear inequality*. Do at least one example from your book explaining your steps.

Step 1:

Step 2:

Step 3:

Ex.

Define each of the following:

Mean:

Median:

Mode:

Plots

Explain how draw each of the following and give an example.

Stem-and Leaf Plot

Ex.

Box-and-Whisker Plot

Ex.