

Math 1010 Final Review PART I

DUE MONDAY DECEMBER 11 BY 5PM

Topics

- order of operations
- writing inequalities using set builder notation, interval notation, and graphing
- prime factorization
- reducing fractions
- combining like terms
- opposite, reciprocal, and absolute value of a number
- distributive property
- adding, subtracting, multiplying, and dividing fractions
- adding, subtracting, multiplying, and dividing integers
- solving linear inequalities
- applications of linear inequalities
- percent
- solving linear inequalities
- solving equations involving absolute value
- solving inequalities involving absolute value
- plotting points
- graphing using the point plot method
- finding x and y intercepts
- graphing a line using intercepts
- graphing a line using the point-slope form of a line
- finding slope
- parallel and perpendicular lines
- graphing inequalities
- evaluating functions
- applications of functions
- adding, subtracting, multiplying, and dividing functions
- composition of functions
- solving systems of linear equations
- applications of systems of linear equations

Memorize

- how to find x and y intercepts
- how to solve equations and inequalities involving absolute value
- $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{\text{rise}}{\text{run}}$
- $y = mx + b$
- how to find parallel or perpendicular slopes
- what $(f + g)(x)$, $(f - g)(x)$, $(fg)(x)$, $\left(\frac{f}{g}\right)(x)$, and $(f \circ g)(x)$ really mean
- how to graph inequalities
- how to solve systems of linear equations

Final Extra Credit Review Problems **PART I**

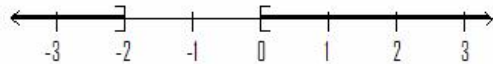
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(15 points)

1.1: 54,58

1.2: 6,19,27,55,62,63

A. Write in interval notation:



B. Write using set builder notation:



C. Graph $[1, 3)$ on the number line.

D. Write $(-5, 3)$ using set builder notation.

E. Write $\{x \mid x < 1\}$ using interval notation.

1.3: 4,12,23,25,61,74,89

1.4: 9,29,38,49,57,70,83

2.1: 25,44

2.2: 38,39,42,57

2.3: 15,17

2.4: 12,35,40

F. What must one be careful of when solving inequalities?

2.5: 12,37

G. Write how to solve equations and inequalities involving absolute value.

2.6: 6,27

3.1: 1,7,18

H. Give the x and y intercepts of $3x - 4y = 24$. Give your answers as ordered pairs.

3.2: 14

I. An equation relating degrees Fahrenheit to degrees Celsius is $F = \frac{9}{5}C + 32$. Convert 22° C to Fahrenheit

and convert -1° F to Celsius.

3.3: 5,11,38,39

Fill in the table.

Slope of the line	Slope of a parallel line	Slope of a perpendicular line
3		
-5		
$\frac{1}{4}$		
0		

3.4: 3,24

3.6: 10,43,53

3.7: 10,16,27,30,41

4.1: 12,32

4.5: 4,25