

# Mat 104 Exam 1 Concepts

- Order of Operations (Groups, Exponents, mult/div LEFT to RIGHT, add/sub LEFT to RIGHT)
  - Solving an equation by clearing fractions (multiply by the common denominator)
  - Graph an inequality by solving first then graphing on a number line
  - Stating the solution above in interval notation
  - Solve an absolute value equation by isolating the absolute value, writing two equations (exactly what you see and then changing the RIGHT side ONLY to negative) , and solving them both.
  - Find the slope given two points (using the slope formula  $m = \frac{y_2 - y_1}{x_2 - x_1}$ )
  - Determine if a list of points is a function (no repeated x-values unless it's the exact same point)
  - Matching graphs to their slopes (Recognize: positive, negative, DNE, and 0 slopes. Then, count the rise over the run to determine the slope)
  - Given a line state a parallel and perpendicular slope to it (Remember: Parallel has the Same Slope and Perpendicular has opposite reciprocal slopes)
  - Given a graph, state the domain (driving your car left to right or squeegeeing Remember to look at the x-values)
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- Cell phone plans word problem (write equations and solve)
  - Absolute value = absolute value (write two equations and solve ONLY change the right side to be negative on the second equation)
  - Solve, graph on a number line, and explain your thinking of an absolute value inequality (Remember, isolate first and then write two statements and solve)
  - Write an equation passing through a point and perpendicular to a line
  - Understand linear modeling
  - Find the slope given two points and use it to find the equation of a line in slope-intercept form
  - Analyze student work and describe errors
  - Solve system of equations using any method