

MAT 135P - Math for Liberal Arts Plus

Statistics Content

Required course textbook: *Contemporary Mathematics* from OpenStax

Statistics Just-In-Time Math Skills Support

Graphing:

Know the Following Definitions	Contemporary Mathematics	Suggested HW or Practice Problems
Independent Variable	Sec 5.7, pg. 429 (in the context of functions)	N/A
Dependent Variable	Sec 5.7, pg. 429 (in the context of functions)	N/A
Ordered Pair	Sec 5.5, pg. 377	N/A
x-axis and y-axis	Sec 5.5, pg. 376-377	N/A
Linear equation in two variables	Sec 5.5, pg. 379-380	N/A
Graph	Sec 5.5, pg. 380	N/A
x-intercept and y-intercept	Sec 5.8, pg. 447-449	N/A
Slope	Sec 5.8. pg. 451-454	N/A
Slope-intercept form of an equation of a straight line	Sec 5.8, pg. 454-456	N/A
The point-slope form of an equation of a straight line	Sec 8.8, pg. 922 (I don't see point-slope in CH 5, but in 8.8 they make it sound like it's been covered previously?)	N/A
Be Able To	Contemporary Mathematics	Suggested HW or Practice Problems
Plot ordered pairs	Sec 5.5 pg. 377-379	YOUR TURN 5.39, pg. 379 Sec 5.5 Exercises, pg. 397 # 1
Construct graphs by plotting points for linear equations in one variable and two variables	Sec 5.5, pg. 382-383	YOUR TURN 5.41, pg. 383 Sec 5.5 Exercises, pg. 400 # 14-20

Be Able To	Contemporary Mathematics	Suggested HW or Practice Problems
Find the slopes given two points	Sec 5.8, pg. 452-454 Sec 5.8, pg. 457-461 (horizontal and vertical lines)	YOUR TURN 5.72, 5.73, pg. 453-454 Sec 5.8 Exercises, pg. 468-472 # 13-24
Construct a graph using the slope and y-intercept	Sec 5.8, pg. 456-457 Sec 5.8, pg. 457-461 (horizontal and vertical lines)	YOUR TURN 5.75, pg. 457 Sec 5.8 Exercises, pg. 472 # 33-44 (includes horizontal and vertical lines)
Find the equation of a line given the slope and y-intercept	Sec 5.8, pg. 454-456 (this is reversed – given equations, find slope & y-int) Sec 5.8, pg. 457-461 (horizontal and vertical lines)	YOUR TURN 5.74, pg. 456 Sec 5.8 Exercises, pg. 472 # 25-32 (reversed – given equations, find slope and y-intercept)

Statistics Applications

Know the Following Definitions	Contemporary Mathematics	Suggested HW or Practice Problems
Mean	Sec 8.3, pg. 864	N/A
Median	Sec 8.3, pg. 859-860	N/A
Range	Sec 8.4, pg. 873	N/A
Quartiles	Sec 8.5, pg. 879	N/A
Standard Deviation	Sec 8.4, pg. 874	N/A
Be Able To	Contemporary Mathematics	Suggested HW or Practice Problems
Develop an understanding of the concept of a Distribution	Sec 8.1, pg. 819-822	YOUR TURN 8.2-8.4, pg. 820-822 Sec 8.1 Exercises, pg. 824-827 # 16-25
Learn how to display distributions using Pie Charts, Bar Charts, Histograms and Stem Plots	Sec 8.2, pg. 830-845	YOUR TURN 8.6-8.11, pg. 833-845 Sec 8.2 Exercises, pg. 854-856 #1-14 (I skipped the Google Sheets Exercises)

Be Able To	Contemporary Mathematics	Suggested HW or Practice Problems
Learn how to measure the center of a distribution by the Mean and the Median	Sec 8.3, pg. 859-866 (Mode is in this section, too)	YOUR TURN 8.17-8.21, pg. 861-866 Sec 8.3 Exercises pg. 869-870 # 2, 3, 5, 6, 8, 9, 11, 12, 14, 15 (I skipped the Google Sheets Exercises)
Learn how to measure the spread of a distribution by using the Range, Quartiles, and Standard Deviation	Sec 8.4, pg. 873-875 (Range and SD) Sec 8.5, pg. 879 Defines Quartiles, but in the context of overall percentiles, not as in building a Boxplot and the Five Number Summary	YOUR TURN 8.24 and 8.26, pg. 873 and 875 Sec 8.4 Exercises, pg. 877-878 # 1-4, 15-20
Learn how to construct BoxPlots	N/A	N/A
Learn how to construct Scatterplots	Sec 8.8, pg. 908-911	YOUR TURN 8.45, pg. 910-911 Sec 8.8 Exercises, pg. 929-930 # 1, 2 (I skipped the Google Sheets Exercises)
Learn methods for studying the relationship between two quantitative/numerical variables	Sec 8.8, pg. 912-921 (they have instructions for Google Sheets, rather than TI-83/84)	YOUR TURN 8.47 and 8.48, pg. 919 and 921 Sec 8.8 Exercises, pg. 930-932 # 7-14 (I skipped the Google Sheets Exercises)
Learn methods for finding the equation of a line that “best fits” the data.	Sec 8.8, pg. 921-924 (they have instructions for Google Sheets, rather than TI-83/84)	YOUR TURN 8.49-8.51, pg. 923-924 Sec 8.8 Exercises, pg. 932 # 15-24 (uses Google Sheets)