

College Algebra Homework Assignments – Part 1General Directions

Throughout the semester, always carefully follow the directions on the homework assignment sheet. Show all work. The more work you show me, the more partial credit I can give you. Graph manually unless you are specifically told to graph with a calculator. With every graph, include a t-chart with 5 “key” points (minima, maxima, inflection points, x-intercepts, y-intercepts). For an oblique line, you may give three points – the x-intercept, the y-intercept, and one additional point. Give domains and ranges in interval notation. Unless otherwise directed, round answers to 3 decimal places. On cycle-back problems, follow the directions from the original assignment. Always check your answers against the back of your textbook (for odds) or the instructor’s book (for evens).

Assignment 1 [20]

p. 69 Visualizing the Graph
 1.1 p. 70 15, 16, 19, 27, 28, 31, 32, 35, 36, 37, 71, 81, 82, 83, 85, 86, 95, 99, 100

Assignment 2 [20 + 2]

1.2 p. 84 On 6, 10, 20 & 39, also explain why it is or is not a function.
 6, 10, 20, 25, 27, 31, 39, 47, 50, 51, 54, 56, 60, 64, 65, 67, 68, 69, 71, 74
 Cycle-back: 1.1 p. 70: #20; Ch 1 Review p. 169: #10 [Find x & y intercepts and 3rd point, then graph.]

Assignment 3 [18 + 4]

1.3 p. 99 11, 15, 16, 20, 24, 27, 31, 33, 34, 37, 38, 45, 46, 49, 53, 55, 57, 66
 Cycle-back: Ch 1 Review p. 169: #11, #15 [Also graph the circle.], #27, #30

Assignment 4 [19 + 3]

p. 114 Visualizing the graph
 1.4 p. 115 On problems 75, 76, 79 & 80, use a graphing calculator to model the data with a linear function. Answer the given questions. Then, record the correlation coefficient and tell the “goodness of fit”.
 7, 29, 31, 33, 35, 36, 37, 42, 44, 49, 50, 61, 65, 75, 76, 79, 80, 81, 82
 Cycle-back: Ch 1 Review p. 169: #18, #50; 1.3 p. 99: #9

Assignment 5 [18 + 4]

1.5 p. 127 On 3 – 21 & 66, also identify the domain and range.
 3, 6, 13, 15, 18, 19, 21, 23, 26, 28, 32, 33, 35, 40, 42, 45, 66, 69
 Cycle-back: 1.2 p.84: #49; 1.3 p. 99: #7; Ch 1 Review p. 169: #29 [It is o.k. to use a calculator to graph the function.], #44

Assignment 6 [19 + 3]

- 1.6 p. 143 On 17 – 31, do part b first.
 3, 5, 17, 20, 22, 31, 46, 47, 50, 53, 61, 65, 71, 73, 77, 84, 91, 104
- Also, find the difference quotient for the following functions:
 a. $f(x) = 2x - 3x^2$ b. $g(x) = x^2 + 4x - 7$ c. $h(x) = 5x^2 - 2x$
- Cycle-back: 1.2 p.84: #73; 1.5 p. 127: #24, #67
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Assignment 7 [21 + 2]

- p. 162 Visualizing the Graph
- 1.7 p. 163 On 74 – 84, also make a t-chart with 5 points and graph the function.
 On 119 – 126, also identify the transformations based on the equation.
 On 129 & 130, also identify the transformations based on the graph.
 59, 64, 66, 74, 77, 78, 79, 80, 83, 84, 98, 100, 103, 119, 120, 124, 125, 126, 129, 130
- Cycle-back: 1.6 p. 143: #63; Ch 1 Review p. 169: #33
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Assignment 8 [20 + 4]

- 2.1 p. 188 21, 23, 24, 31, 33, 35, 36, 37, 42, 43, 49, 51, 53, 55, 57, 83, 88, 97, 102, 103
- Cycle-back: 1.6 p. 143: #49, #74; 1.7 p. 163: #68, #131 [Also identify the transformations based on the graph.]
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Assignment 9 [18 + 6]

- 2.2 p. 198 9, 16, 19, 25, 28, 39, 41, 42, 49, 55, 62, 65, 66, 67, 68, 73, 77, 80
- Cycle-back: Ch 1 Review p. 169: #65 [Do part b first.]; 1.4 p. 115: #83; 1.6 p. 143: #83;
 1.7 p. 163: #70, #82 [Also make a t-chart with 5 points and graph the function.]
- Also, given $f(x) = 3x - 7$ and $g(x) = x^2 + 3x$, find the following:
 a. $(f - g)(x)$ b. the domain of $\frac{f(x)}{g(x)}$ c. $(f \circ g)(x)$
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Assignment 10 [20 + 3]

- 2.3 p. 213 6 [Factor.], 11 [Extract the roots.], 18, 19, 27, 29, 31, 33, 39, 41, 67, 70, 77, 80, 98,
 101, 102, 103, 114, 115
- Cycle-back: 1.6 p. 143: #98, 1.7 p. 163: #104, #122 [Also identify the transformations based on the equation.]
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Assignment 11 [18 + 4]

- p. 225 Visualizing the Graph
- 2.4 p. 226 On 21 & 24, also identify the transformations from the equations.
 On 29, 32, & 34, also find the axis of symmetry and graph the functions.
 3, 10, 15, 21, 24, 29, 32, 34, 35, 36, 37, 40, 41, 43, 44, 45, 49
- Cycle-back: 1.5 p. 127: #5 [Also find domain & range.], #70; 1.6 p. 143: #80; 1.7 p. 163: #99
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