

MATH 118 – Math for the Natural Sciences

MATH 118 · SUGGESTED HOMEWORK · FALL 2017

Section	Exercises
Day One	→ Carefully RE-READ and UNDERSTAND the Syllabus ←
§ P1: Algebraic Expressions	9,11,15,20,25,29,49,57,59,69,91,93,95,99,101,107 - 119(odd), 159,160
§ P.2: Exponents and Sci. Notation	1,3,5,21,29,33,37,39,41,43,47,51,59,63,65,67,95,99,107,115,146
§ P.3: Radicals and Rational Exponents	1,3,5,11,25,29,35,37,41,49,51,61,65,71,73,79,87,91,93,95, 101,103,109,111,119
§ P.2: Exponents and Sci. Notation	From § P.2: 55,57,61,77,83,103,109,111,112,113,114,145
§ P.3: Radicals and Rational Exponents	From § P.3: 21,31,43,53,80,81,89,97,99,107,110,112,113,114,137
§ P.4: Polynomials	13,17,21,29,39,55,65,69,77,83,85,87,89,93,95,107,108,111,113
§ P.5: Factoring Polynomials	9, 11-15(odd), 23,29,37,41,45,47,55,59,65,71, 79,83,93,97,103,117
§ P.6: Rational Expressions (I)	5,9,15,17,27,29,33,39,43,51,53,56,63,69, 73,75,79
§ P.6: Rational Expressions (II)	65,71,74,80,83,87,89,107
§ P.7: Equations	11,15,21,25,35,47,51,71,83,84,87, 91,99-109(odd),111,113,115,121,125,127
§ P.5: Factoring Polynomials	From § P.5: 87,101,104,105,109,112,113, 120,121,138
§ P.6: Rational Expressions	From § P.6: 31,57,69,72,76,81,85,88,106,113,117
§ P.7: Equations	From § P.7: 39,41,73,123,128,131,133,167,169
§ P.9: Inequalities and Absolute Value	5,15,27,31,33,41,47,51,55,59,65,73,89,91,95,113,121,130
Chapter Review: Algebra Worksheet	Work exercises from sections 1.1.1 - 1.1.7; Ex 1 - 124 (OMIT: # 51, 52, 117, & 118)
Exam 1	
§ 1.1: Basics of Graphs	25,55,57,59, 79-86(all)
§ 1.2: Basics of Functions and Graphs	13,15,29,33,35,43,45,59,61,62,71-75(odd),81,85,89,93,95,105,107,122-126
§ 1.3: More on Functions & Graphs	11,13,19,25,27,35,37,45,47,53,61,69-75(odd),83,85,89(use calculator),117
§ 1.4: Linear Functions and Slope	From § 1.4: 7,15,27,33,37,43,67,79,91
§ 1.5: More on Slope	From § 1.5: 1,9,11,25 (may use calculator for some calculations)
§ 1.5: Average Rate of Change	15,17, 29,31 (may use calculator for some calculations)
§ 1.6: Transformations of Functions (1)	17-23(odd),33,35,36,53,55,145
§ 1.6: Transformations of Functions (2)	27,47,52,57,59,67,69,71,77, 127,146,147,151,152
Mid-Chapter	Work on Algebra Worksheet (1.1.1 - 1.1.7); Get caught up on other sections.
§ 1.7: Composite Functions	9,27,35,47,53,59,63,67,73,75,83,85,91,93,95,121
§ 1.8: Inverse Functions	3,5,7,17,19,25,27,29-33(all),36,37,53,55,57,59,63,86
§ 1.9: Distance Formula	1,15,17,19,35,45,53,57,59,63
§ 1.10: Modeling with Functions (1)	15,18,23,25,47,49
§ 1.10: Modeling with Functions (2)	27,31,33,43,45,48,50,67,69
Exam 2	

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Section	Exercises
§ 2.1: Complex Numbers	From § 2.1: 5,7,17,21,27,37,49,51
§ 2.2: Quadratic Functions	From § 2.2: 5,7,8,11,17,31,41,57,65,71
§ 2.3: Polynomial Functions	3,7,9,13,15-18,23,25,31,37,43,47,57,67,69,75
§ 2.4: Dividing Polynomials	9,11,13,15,27,29,43,44,45,52 (you do NOT have to use synthetic Division)
§ 2.5: Zeros of Polynomial Functions	1,3,17,23,24,25,27,29,31,43,47,91
§ 2.6: Rational Functions	5,7,15-20,25,27,29,31,37,39,49,57,65,89,95
§ 2.6: Rational Functions (II)	33,35,43,55,73,91,93,97,111
§ 2.7: Rational Inequalities (1)	17,27,35,43,53,55,61,66,68,70
§ 2.7: Rational Inequalities (2)	25,37,39,41,57,59,63,65,67,69
§ 3.1: Exponential Functions (1)	19-24, 35,39,41,42, 55 (calculator)
§ 3.1: Exponential Functions (2)	52,61,63,64, 73,75 (calculator) , 88,90,91,93
§ 3.2: Logarithmic Functions	1,7,9,13,21,23,27,33,43,48-52,65,73,83,85,87,89,91,97,99, 101,107,109,111,133,147,149
§ 3.3: Properties of Logarithms	5,9,13,29,30,37,41,57,68,70,83,88,93,94,96,97,99,134 Take advantage of this time to get caught up on your weak sections
§ 3.4: Exponential and Log Equations (1)	5,9,19,21,33,41,43,63,71,75,83,89,91,94,95,99,102
§ 3.4: Exponential and Log Equations (2)	16,22,37,42,45,79,87,92,93,97,100,101,117
Exam 3	
§ 4.1: Angles and Radian Measure	15,19,25,29,41,43,45,47,63,65,69,77,80,81
§ 4.2: Trig Functions: The Unit Circle	3,5,7,17,19,23,31,35,41,55,57,59,63,67,71,77,107
§ 4.3: Right Triangle Trigonometry	1,7,9,11,19,29,33,35,53,56,57
§ 4.4: Trig Functions of Any Angle	1,9,11,13,16,19,25,29,66,67,78,85,87,89,91,93,95,99 Any instructions: "for each of the six trig functions", just work the sin, cos, tan, sec
§ 4.5: Graphs of Sine and Cosine	From § 4.5: 5,11,17,39,43,57,61,65
§ 4.6: Graphs of Other Trig Functions	From § 4.6: 1-4
§ 4.7: Inverse Trig Functions (1)	1,9,11,15,25,29,33,35,39,43,55,57,65,71
§ 4.7: Inverse Trig Functions (2)	41,45,61,63,67,72,79
§ 5.1: Verifying Trig Identities (1)	13,21,25,32,43,45,47,51,67
§ 5.1: Verifying Trig Identities (2)	27,29,35,37,41,49,55,57,59
§ 5.5: Trigonometric Equations (1)	9,23,25,27,39,45,67,99,105,113,160
§ 5.5: Trigonometric Equations (2)	100,101,106,115,117
Exam 4	