

MAT 1175 Fundamentals of Mathematics

Text: Miller, O' Neill & Hyde, Intermediate Algebra, custom edition (2011), McGraw Hill

Africk, H. (1997). Elementary College Geometry (please note: this book is free for download at <http://www.citytech.cuny.edu/academics/deptsites/mathematics/docs/MAT1175Textbook.pdf>)

Note: The problems in the algebra text followed by a (G) require some basic geometry (area, perimeter, circumference, Pythagorean Theorem)

Session	Section	Homework
1	Algebra 4.1 (Ex. 1-3) Properties of Integer Exponents and Scientific Notation (pp. 314-316)	TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 321: 11-17 odd, 25-31 odd, 33-55 odd, 61, 63
2	Algebra 4.1 (Ex. 4-7) Properties of Integer Exponents and Scientific Notation (pp. 317-320)	TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 321: 65, 69-83 odd, 85-90 all, 91-103 odd
3	Algebra 2.1 (Ex. 1-6, 8, 9) Linear Equations in Two Variables (pp. 128-137) 2.2 (Ex. 2-7) Slope of a Line and Rate of Change (pp. 145-150) 2.3 (Ex. 1-3) Equations of a Line (pp. 156-159)	TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 140: 15-29 odd p. 153: 13-23 odd, 39-51 odd p. 165: 7-17 odd, 25-29 odd, 33-37 odd
4	Algebra 2.3 (Ex. 4-8) Equations of a Line (pp. 159-163)	TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 167: 39-73 odd
5	Algebra 3.1 (Ex. 1-4) Solving Systems of Linear Equations by the Graphing Method (pp. 234-238)	TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 239: 3-7 odd, 15-23 odd, 27, 31
6	Algebra 3.2 (Ex. 1-3) Solving Systems of Linear Equations by the Substitution Method (pp. 243-246) 3.3 (Ex. 1, 2, 5) Solving Systems of Linear Equations by the Addition Method (pp. 249-253) 3.4 (Ex. 1, 2, 4, 5) Applications of Systems of Linear Equations in Two Variables (Optional) (pp. 256-261)	TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 248: 9-21 odd, 25, 35-37 all p. 254: 5-11 odd, 15, 19, 23, 27, 29, 35 p. 262: (Optional) 5, 9, 11, 17, 23, 29
7	Algebra 4.2 (Ex. 1-5, 7(optional), 8 -- only examples with integer coefficients) Adding & Subtracting Polynomials (pp. 323-328) 4.3 (Ex. 1-5) Multiplication of Polynomials (pp. 334-337)	TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 330: 19, 21, 25-29 odd, 37-43 odd, 47, 49, 51-71 odd, 75 (G), 89 (G), 85 (optional), 95 (optional) p. 340: 7, 8, 13, 14, 17-25 odd, 31, 32, 37, 41-53 odd, 93 (G), 97-101 odd (G)

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8	<p>Algebra</p> <p>4.4 (Ex. 1-3) Division of Polynomials (pp. 343-347) 4.5 (Ex. 1-5) The Greatest Common Factor & Factoring by Grouping (pp. 354-358)</p>	<p>TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 351: 9-17 odd, 25, 27-30 all, 31-37 odd p. 360: 9-25 odd, 31-37 odd, 45-49 odd, 71 (G)</p>
9	<p>Algebra</p> <p>4.6 (Ex. 1-9) Factoring Trinomials (pp. 362-371) 4.7 (Ex. 1-3) Factoring Binomials (pp. 376-377)</p>	<p>TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 373: 9-35 odd, 55-58 all, 87, 88, 91, 93, 94, 95 p. 383: 11-17 all, 59, 60, 95 (G), 96 (G)</p>
10	<p>Algebra</p> <p>4.8 (Ex. 1-3, 7, 8) Solving Equations by Using the Zero Product Rule (pp. 388-393)</p>	<p>TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 397: 17-20 all, 25-35 odd, 42, 43, 45, 63 (G), 65 (G), 67 (G), 72 (G), 75 (G)</p>
11	<p>First Examination</p>	
12	<p>Algebra</p> <p>5.1 (Ex. 3, 4, 6) Rational Expression (pp. 416-422) 5.2 (Ex. 1-3) Multiplication of Rational Expression (pp. 426-428) 5.3 (Ex. 1-9) Addition & Subtraction of Rational Expressions (pp. 431-438)</p>	<p>TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 424: 31-39 odd, 43, 48, 65-73 odd p. 429: 11-21 odd, 23-31 odd p. 438: 7-11 odd, 33-45 odd, 49-57 odd, 79 (G), 81 (G)</p>
13	<p>Algebra</p> <p>5.5 (Ex. 1-5) Solving Rational Equations (pp. 449-454)</p>	<p>TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 455: 9-19 odd, 29-37 odd</p>
14	<p>Algebra</p> <p>6.1 (Ex. 1-3) Definition of an nth Root (pp. 492-494) 6.3 (Ex. 1, 3-6 -- only examples with square roots) Simplifying Radical Expressions (pp. 510-514)</p>	<p>TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 500: 7-15 odd p. 515: 9, 13, 17, 19, 21, 25, 33, 35, 37, 45, 47, 49, 53, 55, 61, 65, 67, 69, 71, 77 (G), 79 (G)</p>
15	<p>Algebra</p> <p>6.4 (Ex. 1-4 -- only examples with square roots) Addition and Subtraction of Radicals (pp. 517-519) 6.5 (Ex. 1-7 -- only examples with square roots) Multiplication of Radicals (pp. 522-526)</p>	<p>TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 520: 15, 19, 23, 35, 37, 39, 41, 45, 51, 55, 57, 79 (G), 81 (G) p. 528: 11, 17, 19, 21, 23, 29, 31, 35, 37, 41, 45, 47, 51, 55, 57, 61, 63, 77, 85 (G), 87 (G)</p>
16	<p>Algebra</p> <p>6.6 (Ex. 1, 3, 5, 7-9 -- only examples with square roots) Division of Radicals and Rationalization (pp. 531-537)</p>	<p>TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 538: 11, 13, 17, 31-39 odd, 53, 63, 65, 67, 75-81 odd</p>

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17	Algebra 6.7 (Ex. 1, 4) Solving Radical Equations (pp. 540-543)	TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 547: 11-16 all, 21, 23, 37-42 all, 63, 64
18	Algebra 7.1 (Ex. 1-3) Square Root Property (pp. 574-575) 7.2 (Ex. 1, 3, 8) Quadratic Formula (pp. 583-592)	TEXT: INTERMEDIATE ALGEBRA BY MILLER, O' NEILL & HYDE p. 580: 2-5 all, 8, 9, 11, 15 p. 595: 9, 12, 15-20 all, 23, 25, 41 (G), 43 (G), 77
19	Midterm Examination	
20	Geometry 1.1 Lines: pp. 1-6: Ex. A-D 7.5 Circumference of a Circle: pp. 331-335: Ex. A, D 7.6 Area of a Circle: pp. 342: Ex. A 1.2 Angles pp. 8-13: Ex. A-C 1.3 Angle Classifications: pp.17-24: Ex. A-F	TEXT: ELEMENTARY COLLEGE GEOMETRY BY HENRY AFRICK Page 7: 1-5 odd Page 339: 1-5 odd, 19-23 odd, Page 348: 1, 3, 7, 9 Page 14: 1-27 odd Page 26: 1-25 odd
21	Geometry 1.4 Parallel Lines: pp. 30-38: Ex. A-E 6.1 The Area of a Rectangle and Square: pp. 244-247: Ex. A-B, D 1.5 Triangles: pp. 46-54: Ex. A-F 6.3 The Area of a Triangle: pp. 260-264: Ex. A	TEXT: ELEMENTARY COLLEGE GEOMETRY BY HENRY AFRICK Page 42: 1-25 odd Page 249: 1-5 odd, 15, 17 Page 55: 1-25 odd Page 265: 1, 3, 7, 21, 23
22	Geometry 2.1 The Congruence Statement: pp. 67-70: Ex. A-C 2.2 The SAS Theorem: pp. 73-78: Ex. A-C	TEXT: ELEMENTARY COLLEGE GEOMETRY BY HENRY AFRICK Page 71: 1-9 odd Page 81: 1-23 odd
23	Geometry 2.3 The ASA and AAS Theorem: pp. 84-91: Ex. A-D 2.5 Isosceles Triangles: pp.103-109: Ex. A-D 2.6 The SSS Theorem: pp. 113-115: Ex. A, B	TEXT: ELEMENTARY COLLEGE GEOMETRY BY HENRY AFRICK Page 93: 1-21 odd Page 111: 1-13 odd Page 118: 1-7 odd
24	Geometry 3.1 Parallelograms: pp. 130-138: Ex. A-G 6.2 The Area of a Parallelogram: pp. 253-257: Ex. A, D, E	TEXT: ELEMENTARY COLLEGE GEOMETRY BY HENRY AFRICK Page 139: 1-17 odd Page 258: 1, 9, 11, 13

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25	Geometry 4.1 Proportions: pp. 157-160: Ex. A, B 4.2 Similar Triangles: pp. 162-169: Ex. A-H	TEXT: ELEMENTARY COLLEGE GEOMETRY BY HENRY AFRICK Page 161: 1-11 odd Page 173: 1-21 odd
26	Geometry 4.4 Pythagorean Theorem: pp. 182-186: Ex. A-D 6.1 The Area of a Rectangle and Square: pp. 244-247: Ex. C 6.2 The Area of a Parallelogram: pp. 253-257: Ex. B 6.3 The Area of a Triangle: pp. 260-264: Ex. C 4.5 Special Right Triangles: pp. 197-203: Ex. A-D 6.3 The Area of a Triangle: pp. 260-264: Ex. D	TEXT: ELEMENTARY COLLEGE GEOMETRY BY HENRY AFRICK Page 192: 1-15 odd Page 249: 7, 9 Page 258: 3 Page 265: 9-13 odd Page 207: 1-19 odd Page 249: 11, 13 Page 258: 7 Page 265: 15, 17
27	Third Examination	
28	Geometry 5.1 The Trigonometric Functions: pp. 215-222: Ex. A-G 5.2 Solution of Right Triangles: pp. 225-230: Ex. A-G 6.2 The Area of a Parallelogram: pp. 253-257: Ex. C 6.3 The Area of a Triangle: pp. 260-264: Ex. B	TEXT: ELEMENTARY COLLEGE GEOMETRY BY HENRY AFRICK Page 223: 1-19 odd Page 234: 11-41 odd Page 258: 5, Page 265: 5, 19 Page 242: 1-5 odd
29	Review	
30	Final Examination	