Homework Assignments by section for Pre-Calculus I MTH-125 from Precalculus: A Unit Circle Approach by Ratti, $3^{\text {rd }}$ edition

| Section |  | Recommended problems (odds unless stated otherwise) |
| :---: | :---: | :---: |
| A1 | The Real Numbers | 1-9,85, 91, 97-133 |
| A2 | Polynomials | 1-15, 17-105 every other odd |
| A3 | Rational Expressions | 3-5, 11-19, 21, 25, 29-65 |
| A4 | Radicals and Rational Exponents | 1-29, 33-45 every other odd, 49-77 |
| A6 | Equations | 1, 5, 9-43 |
| A7 | Inequalities | 1-23, 31-51, 67-71 |
| A8 | Complex Numbers | 1-37 |
| 1.1 | Graphs of Equations | $\begin{aligned} & 7,8,11,12,15-19,31-35,39,43-55,57,58,59,61- \\ & 99,113,117,119 \end{aligned}$ |
| 1.2 | Lines | $\begin{aligned} & 5,6,7,8,9-15,17,18,19,20,21-71,75-103,107 \\ & 121,129,130,141 \end{aligned}$ |
| 1.3 | Functions | $\begin{aligned} & 1-71,75,77,81-99,109,117,123,129,131,135 \\ & 137 \end{aligned}$ |
| 1.4 | Library of Functions | 1-5, 6, 7, 8, 9-35, 39, 43, 47, 53-61, 89 |
| 1.5 | Transformations of Functions | 1, 3, 6, 7, 8, 23-34 all, 83-91, 95-111, 139 |
| 1.6 | Combining \& Composition | 5-8 all, 9-35, 45-63, 67, 71, 75, 87-95 every other odd |
| 1.7 | Inverse Functions | 5, 6, 7, 8, 9-23, 31-39, 43-63, 77, 79, 101, 113 |
| 2.1 | Quadratic Functions | 1, 2, 3, 4, 5, 7, 9-16 all, 17-33, 45-71, 85, 89, 91 |
| 2.2 | Polynomials | $\begin{aligned} & 3-8 \text { all, } 9-19,23-27,29-34 \text { all, } 35,37,43-61,77,85 \text {, } \\ & 115,117 \end{aligned}$ |
| 2.3 | Dividing Polynomials | 4-8 all, 9-27, 39-79, 89, 97, 103, 105 |
| 2.4 | Rational Functions | $\begin{aligned} & 5-8 \text { all, } 9-25,35-51,53-58 \text { all, } 81-91,95,99,121- \\ & 125,129 \end{aligned}$ |
| 2.5 | Polynomial \& Rational Inequalities | 5-8 all, 9-17, 21, 25, 29, 31-71 |
| 2.6 | Zeros | 4-8 all, 31-67 |
| 3.1 | Exponential Functions | 5, 8, 9-25, 33-36 all, 37, 43, 47-57, 63-81, 85, 87 |
| 3.2 | Logarithmic Functions | 1-4 all, 9-69, 72, 81, 89 |
| 3.3 | Rules of Logarithms | $\begin{aligned} & 1-8 \text { all, } 15,17,21-53,67,71,73-5,89,99,101,111, \\ & 117,121,125 \end{aligned}$ |
| 3.4 | Equations | 7-51, 61-79, 101, 105 |
| 4.1 | Angles | 9-17, 23, 29-45, 49, 53-67, 71-77, 91-95, 111 |
| 4.2 | The Unit Circle | 9-13, 21-125, 129, 139-147 |
| 4.3 | Trig Functions of Angles | 9-83, 87-97 |
| 4.4 | Graphs of Sine and Cosine | 29-53, 59-69 |
| 4.5 | Graphs of Other Trig Functions | 7, 13, 15, 31, 37-41, 45-55 |
| 4.6 | Inverse Trig Functions | 1-31, 37-93 |


| 5.1 | Trig Identities | $19,21,25-87,93,95$ |
| :--- | :--- | :--- |
| 5.2 | Sum and Difference Formulas | $5,7,17-21,29-39,53-77,97,101,103$ |
| 5.3 | Double and Half Angle Formulas | $5-13,25-47,63-73,77,93,103-109$ |
| 5.4 | Product to Sum \& Sum to Product | $29,31,37,39,53,55,83$ |
| 5.5 | Trig Equations | $1,5,7-17,35-71,79-105,113,119,123,129$ |
| 6.1 | Right Triangle Trig | $9-13,33-43,49-63,67,69,75,78$ |
| 6.2 | Law of Sines | $9-25,29,33,37-53,59-63,67,69,73,75,85-89,99$ |
| 6.3 | Law of Cosines | $9-23,27,31,35,47,49,55,57,59$ |
| 6.4 | Vectors | $5,17-77$ |
| 6.5 | The Dot Product | $1-8$ all, $9-65,71,73,93,95$ |
| 6.6 | Polar Coordinates | $5,6,17-69$ |
| 7.4 | Matrices | $7,8,9-15,19-41,45,49,55,59,63,67,71$ |
| 7.5 | Determinants | $9,13,17,23,27,31$ |
| 7.6 | Partial Fraction Decomposition | $9-19,23-63$ every other odd |
| 7.7 | Matrix Algebra | $4,5,7,9-43,59,67$ |
| 7.8 | The Matrix Inverse | $1-6$ all, $9-13,19,21,29,31,35-41,49,67$ |
| 8.2 | The Parabola | $9-15,17,21,25-29,33,41,47,49$ |
| 8.3 | The Ellipse | $9,13,17,21,23,27,31,41,45,47,51-59,63,65$, |
| 8.4 | The Hyperbola | 99 |
| 8.7 | Parametric Equations | $9-15,17,21,25,29,33,37,41,43-53,63-75$ |
| 9.1 | Sequence and Series | $8,9,17-23,29-33$ <br> 87 |
| 9.2 | Arithmetic Sequences other odd, 29-49, 59-67, 71, 75, 79- |  |
| 9.3 | Geometric Sequences | $9-19$ every other odd, 23, 25, 33, 35, 39, 41, 45, 47, <br> $49,51,55$ |
|  | $6,8,9-21,29,31,35-41,47,49,53,55,57,67,69$, <br> $73-77$ |  |

