

ACE Technical Math. (MTH 092-12U) Student Name: _____ Start Date: _____

Entry Level Skills

Skills Demonstrated

Skills Learner Needs to Know

POLYNOMIALS AND PROPERTIES OF EXPONENTS

(Chapter 4, Pages 245 to 266, 274 to 307)

Understanding & Use of:

- 4.1 Multiplying & Dividing Common Bases Page 246
- 4.2 More Properties of Exponents Page 255
- 4.3 Definitions of b^0 & b^{-n} Page 260

- 4.5 Addition & Subtraction of Polynomials Page 274
- 4.6 Multiplication of Polynomials Page 283
- 4.7 Division of Polynomials Page 291

Self Assessment Page 305 Grade: _____ Date: _____ Form E Grade: _____ Date: _____

Proposed Polynomials and Properties of Exponents Demonstration Date: _____

Polynom. & Prop. of Exp. Demonstration Form: _____ Grade: _____ Date: _____ Teacher: _____

FACTORING POLYNOMIALS

(Chapter 5, Pages 309 to 324, 334 to 339 and 354 to 373)

Understanding & Use of:

- 5.1 GCF & Factoring by Grouping Page 310
- 5.3 Factoring Trinomial: Grouping Method Page 318

- 5.4 Fact Perfect Sq. Trin. & Diff. of Squares Page 334
- 5.7 Solv. Quad. Equat. Using Zero Prod. Rule Page 354

Self Assessment Page 372 Grade: _____ Date: _____ Form E Grade: _____ Date: _____

Proposed Factoring Polynomials Demonstration Date: _____

Factoring Polynomials Demonstration Form: _____ Grade: _____ Date: _____ Teacher: _____

Entry Level Skills

Skills Demonstrated

Skills Learner Needs to Know

RATIONAL EXPRESSIONS
(Chapter 6, Pages 375 to 404, 412 to 420)

Understanding & Use of:

- 6.1 Introduction to Rational Expressions Page 376
- 6.2 Mult. & Div. of Rational Expressions Page 385
- 6.3 Least Common Denominator Page 390

- 6.4 Add. & Subt. of Rational Expressions Page 397
- 6.6 Rational Equations Page 412

Self Assessment Page 439 Grade: _____ Date: _____ Form E Grade: _____ Date: _____

Proposed Rational Expressions Demonstration Date: _____

Rational Expressions Demonstration Form: _____ Grade: _____ Date: _____ Teacher: _____

INTRODUCTION TO RELATIONS AND FUNCTIONS
(Chapter 7, Pages 463 to 515)

Understanding & Use of:

- 7.3 Introduction to Relations Page 463
- 7.4 Introduction to Functions Page 471

- 7.5 Graphs of Basic Functions Page 483
- 7.6 Variation Page 495

Self Assessment Page 512 Grade: _____ Date: _____ Form E Grade: _____ Date: _____

Proposed Introduction To Relations And Functions Demonstration Date: _____

Intro. To Relations And Functions Demo. Form: _____ Grade: _____ Date: _____ Teacher: _____

Entry Level Skills

Skills Demonstrated

Skills Learner Needs to Know

RADICALS AND COMPLEX NUMBERS

(Chapter 10, Pages 657 to 726)

Understanding & Use of:

- 10.1 Definition of an n th-Root Page 658
- 10.2 Rational Exponents Page 669
- 10.3 Properties of Radicals Page 675
- 10.4 Addition and Subtraction of Radicals Page 681

- 10.5 Multiplication of Radicals Page 686
- 10.6 Rationalization Page 693
- 10.7 Radical Equations Page 700
- 10.8 Complex Numbers Page 708

Self Assessment Page 723 Grade: _____ Date: _____ Form E Grade: _____ Date: _____

Proposed Radicals And Complex Numbers Demonstration Date: _____

Radicals And Complex Numbers Demo. Form: _____ Grade: _____ Date: _____ Teacher: _____

QUADRATIC FUNCTIONS

(Chapter 11, Pages 727 to 749, 755 to 785)

Understanding & Use of:

- 11.1 Sq. Root Prop. & Complet. the Square Page 728
- 11.2 Quadratic Formula Page 736

- 11.4 Graphs of Quadratic Functions Page 755
- 11.5 Applications of Quadratic Functions Page 765

Self Assessment Page 781 Grade: _____ Date: _____ Form E Grade: _____ Date: _____

Proposed Quadratic Functions Demonstration Date: _____

Quadratic Functions Demonstration Form: _____ Grade: _____ Date: _____ Teacher: _____

Entry Level Skills

Skills Demonstrated

Skills Learner Needs to Know

EXPONENTIAL AND LOGARITHMIC FUNCTIONS

(Chapter 12, Pages 787 to 870)

Understanding & Use of:

- 12.1 Algebra and Composition of Functions Page 788
- 12.2 Inverse Functions Page 794
- 12.3 Exponential Functions Page 803
- 12.4 Logarithmic Functions Page 812

- 12.5 Properties of Logarithms Page 824
- 12.6 The Irrational Number e Page 831
- 12.7 Exponential and Logarithmic Equations Page 842

Self Assessment Page 865 Grade: _____ Date: _____ Form E Grade: _____ Date: _____

Proposed Exponential And Logarithmic Functions Demonstration Date: _____

Expon. & Log. Functions Demonstration Form: _____ Grade: _____ Date: _____ Teacher: _____

TRIGONOMETRY

(Chapters 16 & 17, Pages 515 to 573)

Understanding & Use of:

- 16.1 The Trigonometric Ratios Page 516
- 16.2 Values of the Trigonometric Ratios Page 523
- 16.3 Right Triangle Applications Page 530

- 17.1 Signs of the Trigonometric Functions Page 544
- 17.2 Val. of the Trig. Funct. of Any Angle Page 549
- 17.3 The Law of Sine Page 557
- 17.5 The Law of Cosine Page 564

Self Assess. Page 538/570 Grade: _____ Date: _____ Form E Grade: _____ Date: _____

Proposed Trigonometry Demonstration Date: _____

Trigonometry Demonstration Form: _____ Grade: _____ Date: _____ Teacher: _____

Entry Level Skills

Skills Demonstrated

Skills Learner Needs to Know

Introduction to Calculus

Chapter 3, Advanced Functions textbook, Pages 71 to 112

Understanding & Use of:

- 3.1 The Slope of a Tangent page 76
- 3.2 Rates of Change page 87

- 3.3 The Limit of a Function page 95
- 3.4 Properties of Limits page 100
- 3.5 Continuity page 108

Self Assess. Page 119 Grade: _____ Date: _____ Form E Grade: _____ Date: _____

Proposed Introduction to Calculus Demonstration : _____

Introduction to Calculus Demonstration Form: _____ Grade: _____ Date: _____ Teacher: _____

Derivatives

Chapter 4, page 121 to 166

Understanding & Use of:

- 4.1 The Derivative Function page 125
- 4.2 The Derivatives of Polynomial Functions page 133

- 4.3 The Product Rule page 141
- 4.4 The Quotient Rule page 147
- 4.6 The Derivative of a Composite Function page 154

Self Assess. Page 166 Grade: _____ Date: _____ Form E Grade: _____ Date: _____

Proposed Derivatives Demonstration : _____

Derivatives Demonstration Form: _____ Grade: _____ Date: _____ Teacher: _____

Applications of Derivatives

Chapter 4, page 171 to 223

Understanding & Use of:

- 5.1 Implicit Differentiation page 175
- 5.3 Related-Rates page 189

- 5.4 Maximum and Minimum on an Interval page 196
- 5.5 Optimization Problems page 203

Self Assess. Page 223 Grade: _____ Date: _____ Form E Grade: _____ Date: _____

Proposed Applications of Derivatives Demonstration : _____

Applications of Derivatives Demonstration Form: _____ Grade: _____ Date: _____ Teacher: _____

Entry Level Skills

Skills Demonstrated

Skills Learner Needs to Know

Derivatives of Exponential and Logarithmic Functions

Chapter 8, page 295 to 333

Understanding & Use of:

8.1 Derivatives of Exponential Functions page 299

8.2 The Derivative of the Natural Logarithmic Func. page 312

8.4 Maximum and Minimum on an Interval page 318

Self Assess. Page 333 Grade: _____ Date: _____ Form E Grade: _____ Date: _____

Proposed Applications of Derivatives of Exponential and Logarithmic Functions Demonstration : _____

Applications of Derivatives of Exponential and Logarithmic Functions Form: _____ Grade: _____ Date: _____ Teacher: _____

Final Self Assessment Page 973 Grade: _____ Date: _____ Form E Grade: _____ Date: _____

Proposed Final Demonstration Date: _____

Final Demonstration Form: _____ Grade: _____ Date: _____ Teacher: _____

Calculation of Final Grade:

Chapter Demonstrations **Total** _____
Average _____ **Average X 0.70** = _____

Final Demonstration _____ **Final X 0.30** = _____

Total = _____

Final MTH 092 (ACE Tech. Math-12U.) Grade: _____ Date: _____ Teacher: _____
