MATH 135

COLLEGE ALGEBRA * SPRING, 2019 *

Monday	Wednesday
Jan 28 Syllabus From $\mathbb{N}$ to $\mathbb{R}$ -- Number Systems Revenue, Cost, and Profit **Quiz #1** The material for Quiz #1 will come from two parts of the Online Practice: Getting Ready for College Algebra The Five Laws of Exponents HW Text: R.1, Page 7: 11–27 Odd, 59, 61, 65, 69, 71, 73 R.2, Page 14: 49 Online Practice: Number Systems Revenue, Cost, and Profit	Jan 30 Review Quiz Review HW Revenue, Cost, and Profit: Problem #4 PROBLEM SOLVING: 1 FUNCTIONS: mappings, tables, ordered pairs, domain, range, graphs **Quiz #2 (one 4x6 notecard)** You're responsible for everything from Monday's HW. HW Online Practice: Revenue, Cost, and Profit: Problem #4 The Five Laws of Exponents Functions, Domain, Range Text: Review Problems, Page 54 25–27, 29–34, 38, 39, 41, 54, 55, 60, 62

Feb 4

Review Quiz
Review HW

Problem Solving #1: 1–3
Intercepts

Quiz #3 (NO notecard allowed)

Don't forget to restudy The Five Laws of Exponents in the Online Practice.

HW

Online Practice:

Getting Ready for College Algebra – #5 and #10

Number Systems

Problem Solving #1: 1–3

Intercepts

Feb 6

Symmetry (geometric)

$m = \frac{\Delta y}{\Delta x}$

$y - y_1 = m(x - x_1)$

$y = mx + b$

Equation of secant line

Midpoint and Distance

Quiz #4 (one 4x6 notecard)

HW

Text:

Redo the Jan 30th assignment

Page 118: 9, 13, 19, 23, 25
Page 73: 61–69 Odd
Page 72: 41–53 Odd

Online Chapter:

Click on Elementary Algebra on the Home page, then click **Ch 41** on the right side of the screen, and study it carefully.

Above & Beyond (the link below Grades)

Study #3: **Car Loan** – Use the Loan Program to do problems #1 and #6 on the Worksheet, *and bring the worksheet to class Monday.*

Feb 11

$x^2 + y^2 = 100$

The Parabola (from Parabola Ch)

Tangent Lines

Quiz #5 (NO notecard allowed)

HW

Click on Elementary Algebra on the Home page, then click **Ch 81 - The Circle** on the right side of the screen, and study it carefully.

Under the College Algebra link, on the right side of the screen, click **The Parabola**, and study it well.

Feb 13

$\sqrt{x^2} =$

$\frac{-b}{2a}$

$(x-h)^2 + (y-k)^2 = r^2$

TANGENT LINES

Symmetry

Quiz #6 (one 4x6 notecard)

HW

Click on Elementary Algebra on the Home page, then click **Ch 67.5 – Beyond Square Roots** on the right side of the screen, and study it carefully.

Above & Beyond (the link below Grades)

Study **#2**: Islamic Inheritance Laws – *and bring the worksheet to class Wednesday.*

Text:

Parabolas – Page 267: 3–15 Odd [Vertex ONLY]

Circles – Page 588: 7–17 Odd [No graph needed]

Page 43: 11, 17, 19, 21, 25, 31, 33, 35, 37, 39

Page 50: 11, 12, 17, 45, 51, 53, 55, 57

Page 54: 25, 26, 27, 29, 30, 37, 41, 56, 57

Feb 18

Feb 20

Review quiz
Review HW

New material (that is NOT on Test #1)
x^2, x^3, x^4
sqrt, abs val
Translations
Symmetry
The Tangent Line Problem

Review for Test #1

Quiz #7 (one 4x6 notecard)

HW [due Feb 27]

Above and Beyond:

1. The Batting Average Paradox *and bring the worksheet to class Wednesday.*

Text:

Pg 71: All (Graph Matching)
Pg 206: 1–6 (Symmetry)

Feb 25	Feb 27
TEST #1	The Tangent Line Optimization Symmetry **Quiz #8** **HW** *Above and Beyond*: 1. The Batting Average Paradox *and bring the worksheet to class Monday.* *Text*: Pg 267: (Vertex) 3, 7, 11, 13 Parts (a) & (b) 31, 33, 35, 37 Parts (a), (b), and (d) Pg 268: (Optimization) 41, 45, 47, 49, 51, 53 Pg 206: (Symmetry) 7, 9, 11, 13 (No graph) 15–31 Odd Under the **College Algebra** link, on the right side of the screen: **Domain**: Problems 1–32. **Graphing**: Problems 1–8 and 40, a–e

Mar 4	Mar 6
Quiz #9 **HW** From the pdf's: Domain: #33, #34, #35, #36 Polynomials: #9, #13, #15 Cubic Functions: #11, #14, #24	Tangent Lines **Quiz #10** **HW** *From the pdf's*: Domain: 37–42, 60 Polynomials: 9, 13, 15, 16, 17 Cubic Functions: 3, 4, 5, 7, 9, 12, 13, 18, 19, 23 *Text*: Pg 207: 49, 53, 55, 63, 67, 69 [No need to graph] Pg 52: 65, 71, 73, 75 Pg 55: 62 Pg 57: 34

Mar 11	Mar 13
Quiz #11	**Quiz #12**
HW	**HW**
From the pdf's:	*From the pdf's*:
Rational Functions: Study Example 1 thoroughly, and take notes on it. Limits and Branch Functions: #1, #2, #3	Rational Functions: 5–9 Study Example 3, especially the Domain and Range Limits and Branch Functions: 4–10 Linear Modeling: 1–7
Text: Pg 52: 65, 71, 73, 75 Pg 55: 62 Pg 57: 34	
Desmos: Go to ***www.desmos.com*** and click Start Graphing. Use the program to graph Example 2 in the pdf Rational Functions. Print out your graph and bring it to class.	

Mar 18	Mar 20
Quiz #13	New material **Review for Test #2** **Quiz #14** **HW** *From Above & Beyond*: #4: Use the tax brackets given out in class, or click on the website; the first set of tax brackets should be for single filers. Then click on Worksheet and do the problems. *From the pdf's*: Systems: All

Mar 25	Mar 27
TEST #2	**Quiz #15 (on Mar 20 HW)** **HW** *From the pdf's*: Exponential Functions 1–8, Ignore Example 2, 11–18 The Number *e* 7, 8, 9, 11, 12, 13, 14, 15, 16 26, 27, 30, 31 Exponential Equations, Part I Examples 1–4 Problems 1–9 The Ellipse 1–9
Apr 1 	Apr 3 

Apr 8	Apr 10
Quiz #16 **HW** Exponential Equations, Part I 13, 15, 16, 18 The Number *e* 6, 7, 17–22 Logarithms 6–40	Lecture: Factoring, Part II The True/False worksheet, if time permits. **Quiz #17** **HW** All the HW from April 8 The True/False worksheet Factoring, Part II Factoring Cubes #1, #2, #3

Apr 15	Apr 17
Quiz #18	**Quiz #19**
HW	**HW**
Factoring, Part II Factoring Cubes #1, #2, #3 Log Functions 1–4, 6, 10, 12	Restudy Log Functions (from previous HW) The Laws of Logs 5, 6, 7, 10, 11, 12 Exponential Equations, Part II 1–9 Log Equations 1–5, 9, 10

Apr 22	Apr 24
Applications of Exponential and Log Functions ✓ **Quiz #20** **HW** Review: Graphing Log Functions Logarithms 41, 42, 43 The Laws of Logs 15, 16 Exponential Equations, Part II 10, 11, 12, 23, 24 Log Functions 6, 10, 12, 15, 16 Log Equations 13–18	3x3 Systems Sigma Notation **Review for Test #3** **Quiz #21**  Apr 26: Last Day to Drop with a W

Apr 29	May 1
TEST #3 **HW** 3x3 Systems Sequences & Series 17–27, 34–39, 40 g.–j. AND Log Functions 6, 7, 9, 10, 12	**Quiz #22** **HW** *Variation* 1, 2, 3 *Radicals and Inverse Functions* All Problems

May 6	May 8
Quiz #23 **HW** *Variation* All *Sketching Inverses* *Sequences and Series* 1, 2, 3, 4, 7, 8, 11, 12, 15, 16	**Quiz #24** **HW** *Log Functions* Problems 5, 6 *Radicals and Inverse Functions* Problem 1: all parts *Sequences & Series* ALL *Motion Problems* Pursuit Opposite Direction Round Trip Two-Part Journey

May 13	May 15
Binomial Theorem More Derivatives x^n $\sqrt{x}$ **Quiz #25** **HW** *Motion Problems* Pursuit Opposite Direction Round Trip Two-Part Journey *The Binomial Theorem* *Radicals and Inverse Functions* Problem 1: all parts	$m_{\tan}$ for $\frac{1}{x}$ Mixture Problems **Quiz #26** **HW** *Percent Mixture Problems*
May 20	**May 22**
NO new material **Review for Test #4**	**TEST #4**


SUMMER