

Pre-Calculus 11 Learning Guide Package



Welcome to Pre-Calculus 11

Our goal at Frances Kelsey is to help you become familiar with the material in Pre-Calculus 11.

- Keep in contact with your marking teacher.
- Work with a partner.
- Work on Math in the Math Work Area!

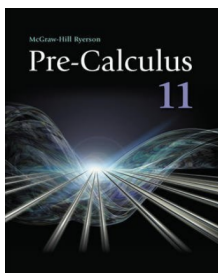
Steps for Success:

1 READ THROUGH Before each math class be sure to read through the pages listed in the Learning Guide.	2 SIT THROUGH During designated math classes be sure to attend and listen to the seminar. Ask Questions	3 WORK THROUGH Work through the listed questions, worksheet and quizzes. Be sure to self correct your work.
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YOU NEED:

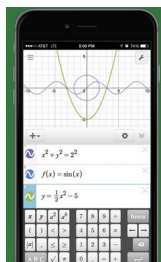
TEXTBOOK

You can sign out a Textbook from the Science Kiosk.

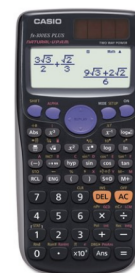


GRAPHING CALCULATOR

Go to Apps store on your phone and load **desmos.com**
OR use school iPad



SCIENTIFIC CALCULATOR



LG 0 - COURSE OUTLINE

Listed below are the topics of the 18 Learning Guides that are taught.

TOPICS:

- LG 1/2 *Financial Literacy*
- LG 3/4 *Real Numbers, Powers & Factoring*
- LG 5/6 *Quadratic Functions*
- LG 7/8 *Quadratic Equations*
- LG 9 *Mid-Term*
- LG 10/11 *Radical Functions & Equations*
- LG 12/13 *Rational Functions & Equations*
- LG 14/15 *System of Equations & Inequalities*
- LG 16/17 *Trigonometry*
- LG 18 *Final Exam*

“Don't worry about the difficulties in mathematics; I can assure you that mine are still greater” A. Einstein

HOW TO BE SUCCESSFUL:

- *Arrive to class prepared and on time.*
- *Work with a partner.*
- *Ask for help as soon as you need it. Don't put off to another day!!*
- *Be an active learner. Participate in discussions and activities.*
- *Use Work Blocks and homework time to complete assignments.*
- *Study/review for tests.*
- *Stay up to date with the course. Mandatory test dates are in effect.*

Come for Math Help ~ TBA _____

EVALUATION

- *Assignments / Guide Work 20%*
- *Tests / Quizzes 80%*

Procrastination makes easy things hard, hard things harder. – Mason Cooley

LG 1 & 2 – Financial Literacy

What will I have to do for LG 1?

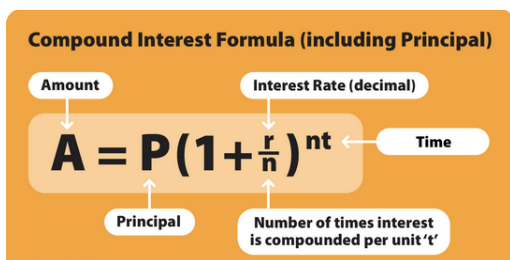
1. **Financial Literacy Vocabulary**

- Do: Worksheet 1 in Resource Package

2. **Simple and Compound Interest**

Listen: To seminar!

- Do: Worksheet 2 in Resource Package



3. **Debt Consolidation**

Listen: To seminar!

- Do: Worksheet 3 in Resource Package



What will I have to do for LG 2?

In Class Activity

Attend: Participate!

- Do: Class Activity “Credit Problems”

Project

- Do: Buying a House



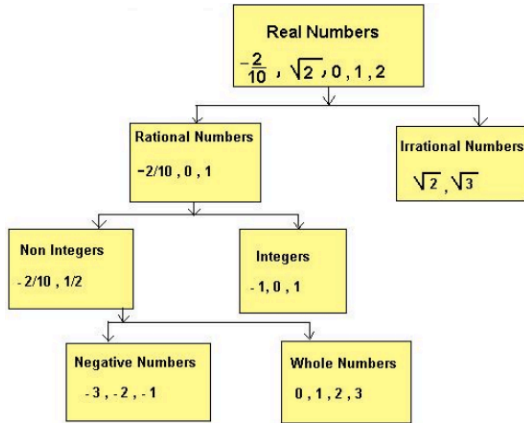
No Test 😊

LG 3 & 4 – Real Numbers, Powers & Factoring

What will I have to do for LG 3?

Real Numbers

Do: Worksheet 1 & 2 in Resource Package



Rational Exponents

Do: Worksheet 3, 4 & 5 in Resource Package



Do the LG 3 quiz found in your “Quiz Package and see your teacher to get it marked.

“Be sure to keep all of your Quizzes for further review.”

What will I have to do for LG 4?

Factoring

Do: Worksheet 6 to 12 in Resource Package

Factor $x^2 - 7x + 10$ $x^2 = x \cdot x$

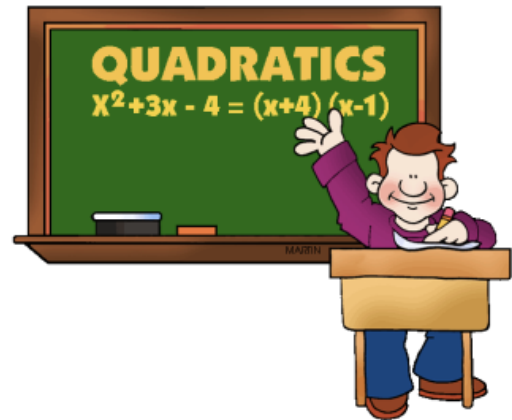
$(x - 2)(x - 5)$

FOIL
First Outer Inner Last

$x^2 - 5x - 2x + 10$

Simplify

$-2 \cdot -5$



Go Over Formative Quiz from LG 3

See your teacher to do the LG 3/4 Summative Test

LG 5 & 6 – Quadratic Functions

What will I have to do for LG 5?

3.1 Quadratic Functions in Vertex Form

Read: P. 142 - 156

Do: P. 157 1 - 9
P. 158 13a, 15, 20 – 22

Do: Worksheet 1 in
Resource Package

3.2 Quadratic Functions in Standard Form

Read: P. 346 - 354

Do: P. 354 1, 2, 3ace, 4, 6
P. 355 7, 9, 11, 12
P. 357 13, 14
P. 357 C1, C2

Do: Worksheet 2 in
Resource Package

Review

Do: P. 198 1 - 8
P. 198 9 - 13

Do the LG 5 quiz found in your “Quiz Package” and see your teacher to get it marked.

“Be sure to keep all of your Quizzes for further review.”

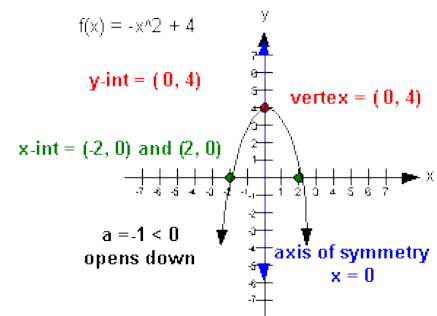
What will I have to do for LG 6?

3.3 Completing the Square

Read: P. 180 - 192

Do: P. 192 1 – 7
P. 193 9, 10a, 11,
P. 194 12, 15, 18ab, 19ab, 25

Do: Worksheet 3 in
Resource Package



Review

Do: P. 200 14 – 17

Practice Test

Do: P. 201 1 - 13

Go Over Formative Quiz from LG 5

See your teacher to do the LG 5/6 Summative Test

LG 7 & 8 – Quadratic Equations

What will I have to do for LG 7?

4.1 Graphing Quadratic Equations

Read: P. 206 - 214

- Do:** P. 215 1 - 6
P. 216 8 - 11, 13

4.2 Factoring Quadratic Equations

Read: P. 218 - 229

- Do:** P. 229 1 - 13
P. 232 19, 28

$$3x^2 - 11x - 4 = 0$$
$$(3x+1)(x-4) = 0$$

Review

- Do:** P. 258 1 - 10

- Do the LG 7 quiz found in your “Quiz Package” and see your teacher to get it marked.**

“Be sure to keep all of your Quizzes for further review.”

What will I have to do for LG 8?

4.3 Solving Quadratics by Completing the Square

Read: P. 234 - 240

- Do:** P. 240 1 - 7
P. 241 9, 10, 12

4.4 The Quadratic Formula

Read: P. 244 - 253

- Do:** P. 254 1 - 5
P. 255 11, 13, 14

- Do:** Worksheet 1 & 2 in Resource Package


Review

- Do:** P. 259 13 - 17
P. 260 18 - 20

Go Over Formative Quiz from LG 7

- See your teacher to do the LG 7/8 Summative Test**

The Quadratic Formula ...

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$


For Quadratic Equations

$$ax^2 + bx + c = 0$$

“One should study Mathematics simply because it helps to arrange one’s ideas” M. W. Lomonossov

LG 9 – Midterm & Review

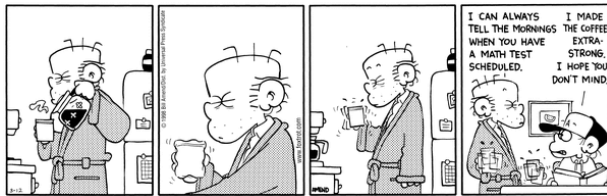
What will I have to do for LG 9?

☐ See your teacher to do the

☐ **Do:** Review questions
P. 201 1 – 13, 15

Review: Review Worksheets &
Formative Quizzes

LG 9 Summative Test

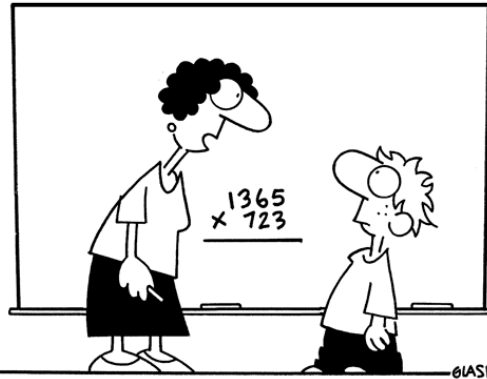


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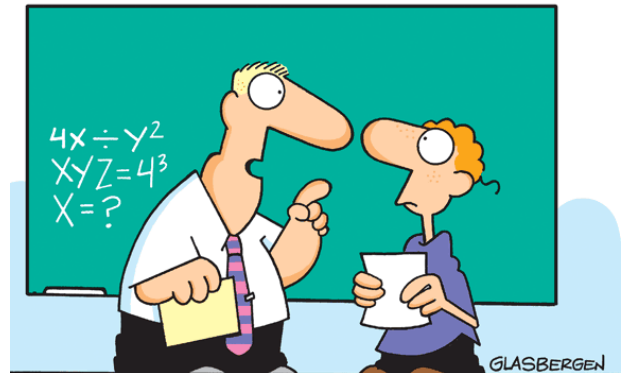
“It’s important to learn math because someday you might accidentally buy a phone without a calculator.”

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“Pretend you’re starring in a reality show about a kid who can make his dreams come true if he works hard and gets good grades.”

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“Algebra will be important to you later in life because there’s going to be a test six weeks from now!”

“I will think of solutions. I will not let my worry control me. I will not let my stress level break me. I will simply breathe. And it will be okay. Because I don’t quit” Shayne McClendon

LG 10 & 11 – Radicals

What will I have to do for LG 10?

5.1 Working With Radicals

Read: P. 272 - 278

Do: P. 278 1 – 10(ac for all), 11
P. 280 14, 15, 17, 20

Do: Worksheet 1 in
Resource Package

5.2 Multiple/Divide Radicals

Read: P. 282 - 289

Do: P. 289 1 – 11(ac for all)
P. 291 17, 21, 23

Do: Worksheet 2 in
Resource Package

Review

Do: P. 304 1 – 3, 6, 7
P. 304 10, 11, 13 - 16

Do the LG 10 quiz found in your “Quiz Package” and see your teacher to get it marked.

“Be sure to keep all of your Quizzes for further review.”

What will I have to do for LG 11?

5.3 Radical Equations

Read: P. 294 - 300

Do: P. 300 1 – 10(ac do all)
P. 301 11 – 14, 18, 23

Do: Worksheet 3 in
Resource Package

Review

Do: P. 305 18, 19, 21

$$\begin{aligned}2 + \sqrt{3x} &= 7 \\ \sqrt{3x} &= 5 \\ (\sqrt{3x})^2 &= (5)^2 \\ 3x &= 25 \\ x &= \frac{25}{3}\end{aligned}$$

Go Over Formative Quiz from LG 10

See your teacher to do the LG 10/11 Summative Test

LG 12 & 13 – Rationals

What will I have to do for LG 12?

6.1 Rational Expressions

Read: P. 310 - 317

- Do:** P. 317 1 – 8 (ace for all)
- P. 318 9, 13, 14, 15
- P. 319 20, 22
- P. 320 26

- Do:** Worksheet 1 in
Resource Package

6.2 Multiply/Divide Rational Expressions

Read: P. 322 - 326

- Do:** P. 327 1 – 9 (ac for all)
- P. 327 13 - 16

- Do:** Worksheet 2 in
Resource Package

Review

- Do:** P. 352 1 – 7
- P. 352 9 - 12

- Do the LG 12 quiz found in your “Quiz Package” and see your teacher to get it marked.**

“Be sure to keep all of your Quizzes for further review.”

What will I have to do for LG 13?

6.3 Add/Subtract Rational Expressions

Read: P. 331 - 335

- Do:** P. 336 1 – 7 (ace for all)
- P. 336 8, 10
- P. 337 12

- Do:** Worksheet 3 in
Resource Package

6.4 Rational Equations

Read: P. 341 - 347

- Do:** P. 348 1 – 4 (ac for all)
- P. 348 6, 8, 9
- P. 350 21

- Do:** Worksheet 4 in
Resource Package

Review

- Do:** P. 353 13 – 15 all
- P. 354 20, 21

Go Over Formative Quiz from LG 12

- See your teacher to do the LG 12/13 Summative Test**

- **Method 1: Clear Fractions**

2. **Solve:** $\frac{x+1}{x+2} = \frac{x+5}{x+7}$

$$\frac{x+1}{x+2}(x+2)(x+7) = \frac{x+5}{x+7}(x+2)(x+7)$$

$$(x+1)(x+7) = (x+5)(x+2)$$

$$x^2 + 8x + 7 = x^2 + 7x + 10$$

$$8x + 7 = 7x + 10$$

$$x = 3$$

LG 14 & 15 – System of Equations & Inequalities

What will I have to do for LG 14?

8.1 Solving Systems of Equations Graphically

Read: P. 424 – 434

- Do:** P. 435 2, 3, 4, 5 (a,c,e)
- P. 436 6, 7, 8, 9, 10, & 14a
- P. 439 17 a,b

8.2 Solving Systems of Equations Algebraically

Read: P. 440 – 451

- Do:** P. 451 1, 2, 3, 4, 5 (all)
- P. 452 8-10, 12 (a,b,c)
- P. 453 13, 16, 17

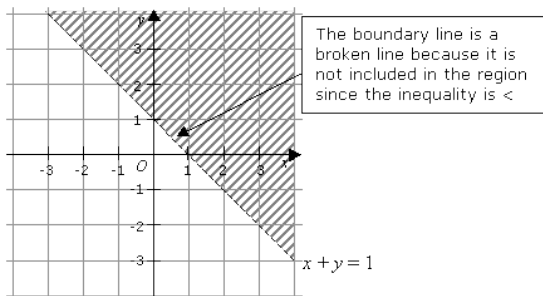
- P. 455 20

- Do:** Worksheet 1 in Resource Package

Review the concepts in these sections by doing the following Review questions:

- Do:** P. 457 1, 3, 5, 7 a,b
- P. 458 8-11

- Do the LG 14 quiz found in your “Quiz Package” and see your teacher to get it marked.**



What will I have to do for LG 15?

9.1 Linear Inequalities with Two Variables

Read: P. 464 - 471

- Do:** P. 472 1 - 9
- P. 473 11 a,b,c 13, 15, 17

- Do:** Worksheet 2 in Resource Pkg.

9.2 Quadratic Inequalities with One Variable

Read: P. 476 - 484

- Do:** P. 484 1 - 9
- P. 486 12, 13, 17 a,b,c

- Do:** Worksheet 3 in Resource Package

9.3 Quadratic Inequalities with Two Variables

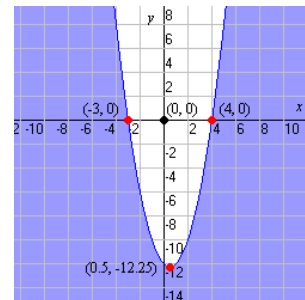
Read: P. 488 - 496

- Do:** P. 496 1 - 8
- P. 498 9, 11, 13, 14

- Do:** Worksheet 4 in Resource Package

Go Over Formative Quiz from LG 14

- See your teacher to do the LG 14/15 Summative Test**



LG 16 & 17 – Trigonometry

What will I have to do for LG 16?

2.1 Angles in Standard Position

Read: P. 74 – 81

Do: P. 83 1 – 8 all

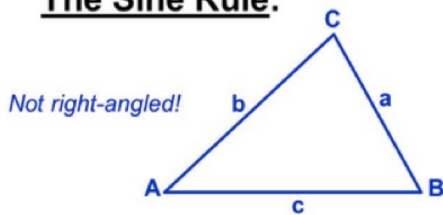
Do: Worksheet 1 in
Resource Package

2.3 The Sine Law

Read: P. 100 – 104

Do: P. 108 1 – 8, 10 – 14
P. 110 18, 21, 22

The Sine Rule:



In any triangle ABC

$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

Do the LG 16 quiz found in your “Quiz Package” and see your teacher to get it marked

What will I have to do for LG 17?

2.4 The Cosine Law

Read: P. 114 – 119

Do: P. 120 1 – 6 all
P. 121 10, 15, 20

Do: Worksheet 2 in
Resource Package

2.3 The Sine Law – Ambiguous Case

Read: P. 104 – 107

Do: P. 108 6 – 8 all
P. 109 11

Do: Worksheet 3 in
Resource Package

*** **NO TEST** ***

ASSESSMENT IS:

PROBLEM BASED ASSESSMENT

**Air Traffic Controller & Pilot
SEE YOUR TEACHER
FOR DETAILS**



LG 18 – Final Exam

What will I have to do for LG 18?

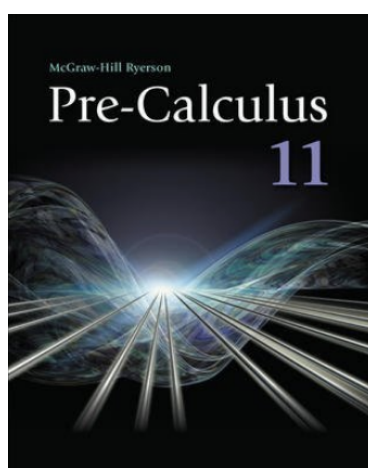
Cumulative Reviews	
Chapter 2	p. 134
Chapter 3 - 4	p. 264
Chapter 5 - 6	p. 416
Chapter 8 - 9	p. 508



*There is no substitute
for hard work.
- Thomas Edison*

RETURN YOUR:

TEXTBOOK



To

SCIENCE KIOSK

LEARNING GUIDE PACKAGE

LEARNING GUIDES

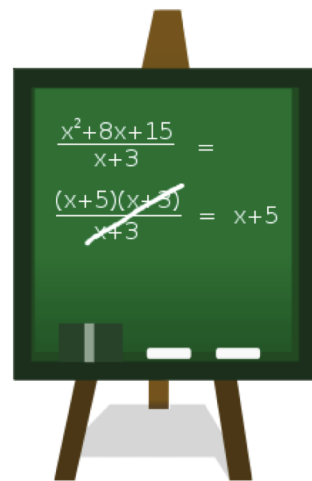
1 - 18



PRE-CALCULUS 11



FRANCES KELSEY SCHOOL



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