

Chapter 1 textbook scan

Chapter 3 textbook scan part 1 and part 2

Ch 7 scan

In bold is the date on which the assignment is given. Prepare the work shown and be ready to ask/answer questions the following class day.

WEEK 1

Read Sec 1.1-1.2; do Comprehension Checks throughout the reading.

 Do on pp. 31-32, Sec 1.1 and 1.2 problems.

Go to [Practice worksheets](#) and choose the one on radicals and rational exponents.

To help you, view Simplifying radicals with constants only and With variables

Read Sec 1.3 Finish up Sec 1.1 and 1.2 problems. Do all problems for Sec. 1.3, pp 32-33.


Read Sec 1.4 and view FACTORING VIDEOS:

Magic factoring (aka factoring by trial and error)

Factoring by grouping (with example using magic factoring)

Factoring sums and differences of cubes

WEEK 2

 Study for quiz on Sections 1.1 to 1.3

Do all Sec 1.4 problems.

For Sec 1.5, view these videos along with reading the book - Operations on Rational Expressions:

Writing rat'l expressions in lowest terms

Multiplying, dividing rat'l expressions Ex 1

Multiplying, dividing rat'l expressions Ex 2

Multiplying, dividing rat'l expressions Ex 3

Adding, subtracting rat'l expressions, several examples

Adding, subtracting rat'l expressions, one more good example

Read Sec 1.5; do exercises pp 33-34 #1, 2, 3 a-i

Read Sec 1.6.

View Solving an equation involving two radicals Ex 1

and Ex 2

Do Sec 1.6 p 34 #1 a-m

View Completing the square to solve an equation: Ex 1 and Completing the square to solve an equation: Ex 2

After viewing, read Sec 2.2.

Do p 58 completing the square #1 all, #2 all, #3 a-g

Read 2.1; do p 58 polynomial division #1 a-f

WEEK 3

Quiz 2: Factoring (special products, reverse FOIL, and grouping), simplifying a rational equation (state the restrictions on x at the end), solving a radical equation (don't forget to check your answer), solving a quadratic equation by completing the square.

Read Sec. 3.1 and 3.2. Look esp at the domain examples and comprehension checks.

Algebraically Finding the Domain of a Function

Do pp 84-85 #1 a c d f, 4 all, 6 a b, 7, 9

Read Sec 3.3 and 3.4

Do p 85 2, 3 b d, 4, 6 a b, 7

Watch the videos:

Evaluating piecewise functions

Domain of a composition of functions

Read Sec 3.4 and view:

Understanding one-to-one functions and inverses

One-to-one functions

Finding the inverse of a function

Do Sec 3.4 pp 86-87 #1-5.

Extra practice worksheet on finding inverse functions (especially the second set on the page):

Inverse functions worksheet

Quiz 3 on composition of fcn's and their domain, finding the inverse of a fcn, showing a fcn is 1-1, using the definition (I'll leave an example on the board for that one, as I did on the first quiz).

Read Sec 3.3 and view: Even and odd functions

Do p 86 Sec 3.3 #1 a b c d, 2 all, 4, 5 a b, 7

Extra practice worksheets on Odd/Even/Neither:

Odd, even or neither worksheet

More even, odd, neither practice

 Study for Exam 1. It covers Ch 1, Ch 2.1 and 2.2 and Ch 3.

Topics: simplifying, performing operations on exponents and radicals; same for rational expressions; factoring; completing a square with leading coeff NOT equal to 1; solving equations (quadratic, radical, rational); function domain (interval notation); operations on fcn's, esp composition and resulting domain; identifying even, odd fcn's by evaluating $f(-x)$ and comparing to $f(x)$; showing a fcn is one to one, long division of polynomials, finding inverse of a fcn.

Practice worksheet for Exam 1

Key to practice worksheet for Exam 1

WEEK 4

Study for Exam 1

Next Unit: Ch 4, Ch 5 and Ch 6

Read Sec 4.1 and 4.2.

View Graphing piecewise functions 1

Graphing piecewise functions 2

Domain and range of piecewise functions

Do Sec 4.1, which is about basic functions, shifted left, right, up or down, stretched or compressed.

Do Sec 4.1 pp 110-111 #1, 4, 6, 7, 8

View: Graphing transformed functions 1

Graphing transformed functions 2

WEEK 5

Read Sec 4.2; do pp 111-112 #1a-o, 4, 6, 7, 8.

Study for Tuesday quiz on parent functions and rigid transformations.

Catch up on any Ch 4 problem sets and videos.

Read Sec 5.1: Understanding important features of polynomials in order to graph them.

View IMPORTANT video:

End behavior, roots and multiplicity of roots to graph a polynomial

Do pp 150-151 #1-7

Do p 151 #8, 9.

Read Sec 5.2. View:

Find equation using point-slope form

Parallel and perpendicular lines

Midpoint

Distance formulas

Quiz 5, Take-home quiz on polynomial graphing

Go back and view Rational root (zeroes) theorem

Rational root theorem, example

Rational root theorem

Find equation using point-slope form

Parallel and perpendicular lines

Midpoint

Distance formulas

Do Sec 5.2 pp 151-152 #3-6, 8 a b e, 9, 10, 11 a b, 12 a c, 16-18

WEEK 6

MAKE SURE YOU HAVE DONE enough of SEC 5.2 problems to be able to do a multi-part problem on lines as we did today

Read Sec 5.3 (again, about roots of second degree polynomials, i.e., quadratic functions. Solving these is just like what we did in Sec 1.6. Check out 😊 My notes on quadratic equations, formula, and meaning of roots

View Using the discriminant to find the number of roots and More using the discriminant

Do p 153 #1, 2, 3

Read Sec 6.1. View Graphing a simple rational function

Graphing a harder rational function

Do p 188 Sec 6.1 #2, 3

View Slant asymptotes

Read Sec 6.2-6.3; do Sec 6.2 pp 188-189, #3 a-d, 5 a b, 6 all

Sec 6.3 p 190, #1 a-e and Sec 6.4 pp 190-191 #1-4.

WEEK 7

Study for 😊 Exam 2, Chapters 4, 5, 6.

Graphing rational function practice 'quiz' to be desk-checked (not collected) on Monday !

WEEK 8

Read Sec 7.1

🚨 Go to [Videos](#) and view 'Solving quadratic and rational inequalities'

Do problems in Sec 7.1 p 215 #1 a-e, f, 2 a-c, e, 3 a-e, 6

Read Sec 7.2. View:

Absolute value equations--Example 1

Absolute value equations--Example 2

Eqns with two abs values, Example 1

Eqns with two abs values, Example 2

Eqns with two abs values, Example 3

WEEK 9

Using my notes Solving absolute value equations along with last set of videos:

Do Sec 7.2 p 215 #1, 2, 3, 5 a-h, 7, 8

Read Sec 7.3 and view the videos in conjunction with the reading.

View Overview: Absolute value equations and inequalities



Abs value inequalities Example 1a

Example 1b

Example 2a

Example 2b

Example 3

 Absolute Value Wrap up 

Heads up: there will be a quiz on Ch 7 and 11 on either Thurs or Fri.

Read Sec 11.1.

View Solving linear systems by elimination method

Do Sec 11.1 #1 a b d, 2 a, 4-6 all parts

Take home quiz handed out today, due tomorrow! The one linked here includes a question 3 b, which I deleted in the handout to fit whole quiz on one page. Tonight's reading and videos are topics on the quiz, so you do need to do this 'open book'.

Read Sec 11.2 (to help you with the quiz!)

View Solving systems of inequalities

Solving (graphing) systems of inequalities

Do Sec 11.2 #2 a d g h

Read 10.1

Week 10

Do p 348 Sec 10.1 #1, 2, 3 and first three sections of questions on Solving exp and log equations

Even more practice on first set of questions on p 5 of Alternate text pdf

Read Sec 10.2

View Properties of logarithmic functions

Study for short answer quiz based on first three sections of questions on the pdf Solving exp and log equations up through Exercise 6.

See this page for Solutions to "Solving exp and log equations"

Do Sec 10.2 #1, 2, 3 a-g, 4, 7, 9, 10, 11

3 examples of solving exponential equations

Example solving logarithmic equations

Another example solving logarithmic equations

Exponential problems not requiring logarithms

Continue with problems Sec 10.2 #18, 19 a 20 b 21 a b 22, 23

Finish the Sec 10.2 problems (we're caught up now).

Read Sec 2.4 and view videos on sigma notation, which I will post soon. Also read my summary of sigma notation and finding finite sums of a number sequence

Sigma notation notes

View the following, noting that the lecturer is using 'k' for the index rather than 'i' (both are common letters for this process):

Sum (sigma) notation

Sigma (summation) formula properties

Example of changing upper and lower bounds of a sum

Here's a nice: Summary of sigma notation

Again, here are my notes on Sigma Notation

Do p 60 #4 a b e k j l #3 a b c Solutions are already posted on HW Solutions page for this section.

Study for Exam 3. Ch 7, 10, 11, and Sec 2.4 🤔

Week 11

Begin Trigonometry Unit. Read 8.1 and 8.2 CAREFULLY.

View Converting degrees to radians

Basic sine and cosine functions

Weeks 12-16 Trigonometry Unit (HW over the Spring Break)

Using the video and examples in the book, do Sec 8.1 p 282 #1-6

View AGAIN as needed Basic sine and cosine functions

Do worksheets Trig worksheets:

Angle measure

Coterminal and reference angles

Arc length and sector area

Here are videos to help:

Finding a reference angle

Finding quadrant an angle lies in

Finding arc length

Finding area of sector

Circle art assignment

- On *unlined* paper (copy paper is good), draw a *nice* circle (use a jar lid or compass, a straight edge for the rays). It should be no less than 6 inches.
- *Neatly* mark off with a *straight edge* and label *accurately* the angles of 0, 30, 45, 60, 90, 120, 135, 150, 180, 210, 225, 240, 270, 300, 315, 330, 360.
- Next to each degree mark, write the pi radian equivalent, as discussed in class today.
- Use different colors to mark off the different fractions of pi. Some colors might overlap. Don't stress on that! Just make the thirds different than the fourths and the sixths.

The rest of the project will be explained on Thursday in class:

- In a corner, draw thumbnails of the five triangles. (Two of them look like line segments, the 0 and 90 degree base angle ones.) Label the sides with the appropriate $1, \sqrt{3}, \sqrt{2}$.

- Next to that, fill in a small table of trig angles and sine, cosine and tangent ratios in quadrant I.

Especially important tonight, please view:

Trick to remember basic trig table

Sign of trig functions in quadrants I, II, III, and IV

Do Sec 8.2 p 283 #1-10 and Sec 8.3 p 284 #1-5

Do worksheet Trig ratios of special angles, handed out on Friday.

View Deriving values of the unit circle

Then do make your own Unit Circle, either on the back of your circle art or on another sheet. The radius is 1 unit, so the (x, y) coordinates become (cos theta, sin theta). Fill in the points on the circle (as begun in class).

Especially important this weekend, view Finding coordinates of the point on the unit circle where the terminal side of angle theta intersects the circle.

Read Sec 8.4 Do pp 284-285 #1-9.

Week 13

View UNWINDING THE UNIT CIRCLE TO GRAPH TRIG FUNCTIONS

Read *thoroughly* Sec 8.5.

Memorize Basic graphs of trigonometric functions

Know domains and ranges of sine, cosine and tangent functions. Be able to sketch these accurately.

do Sec 8.5 p 285 #2 a b d #3 a b #4 a b c

Have you viewed Graphing sine and cosine functions yet? Do so again before reading Graphing sine and cosine graphs and their transformations

Then view the series of videos by Patrick on graphing trigonometric transformations:

Transformations of trig graphs 1

Transformations of trig graphs 2

Transformations of trig graphs 3

Transformations of trig graphs 4

Take-home, trig quiz 2.

You may use your unit circles and notes, but not another person.

Read Sec 8.6.

As done in class today, practice drawing small graphs of the following.

$y = \sin x$ on the closed interval $[-\pi/2, \pi/2]$

$y = \cos x$ on the closed interval $[0, \pi]$

$y = \tan x$ on the closed interval $[-\pi/2, \pi/2]$

You've drawn each fcn restricted to the portion of the domain where its inverse is defined, where the function is one-to-one. To the left of each graph, draw its inverse. Notice the x-axis is now the ratio and the y-axis is the angle.

View Evaluating trig inverses

Do Sec 8.6 p 286 #1-6.

Week 14

More practice on Worksheet on evaluating inverse trig fcns Only do #1-30

Finish up inverse functions.

Read 8.7 and view Proving a trig identity Example 1 and Proving a trig identity Example 2

Do p 288 #3 and *pages 1 and 2* of worksheet Basic trig identities

Read Sec 8.8. See two video discussions.

Angle sum and difference

Do worksheet Double and half-angle identities

Week 15

Be sure to do the take-home quizzes for desk checks.

Print these for tomorrow:

Solving trig equations

Solutions! to trig equations

Have questions prepared for any and all of the worksheets for me to go over tomorrow (Tuesday).

⚠ Exam 4 is on Thursday.

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