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Algebra 2

Please review the FAQs and [contact](#) us if you find a problem.

Credits: 1

Recommended: 10th, 11th

Prerequisite: Algebra 1, Geometry

Test Prep: [CLEP College Algebra](#), [CLEP College Mathematics](#)

Course Description: This course covers advanced algebra topics including: linear equations, matrices, absolute value, inequalities, factoring, parabolas, quadratics, complex numbers, exponents, polynomials, functions, composite functions, inverse functions, rational expressions, conic sections, probability mechanics, algebraic and geometric sequences and series and basic trigonometric functions. Most topics include solving and graphing equations. Students will learn by using online texts and videos. Students will do daily problem solving including SAT prep questions. Grading will be based on quizzes, tests and a final exam.

This course comes from [Algebra 2 Online!](#) and [Intermediate Algebra](#); it also uses [Math is Fun](#), [Yay Math!](#) and Khan Academy.

Algebra 2 Online has taken down the assignments we linked to. We were able to copy their questions and answers before they closed. We may be switching back some assignments when they have their update ready. Because of the graphs and complicated equations, much of it was put on our site as images. If an image is ever too small for comfort, just enlarge it on your screen. (For example: Use ctrl + on Windows, your fingers on a mobile device, etc.)

Notes:

You will sometimes need [graph paper](#). I will not put this in later for you to print out. Print some out before you begin the course to have on hand.

You are allowed to use a [calculator](#) during this course. Do not use programs that solve the problems for you. There is no point to using those when you are just learning. You won't learn how to solve the problems if someone is doing it for you. The calculator is for calculations. You already are great at multiplying and dividing and don't need to spend time working out answers to those types of things. You can even use a calculator on tests. Cheating is a form of lying, and like lies, it eventually catches up to you.

Things that say "presentation" are Shockwave Flash files. You will need it installed/updated/enabled in order to view them. If you are using an iPad or other tablet, make sure you are using an app or browser that will allow you to view them. A few times Java is also used.

Day 1(*)

1. If you didn't get here through [My EP Assignments](#), I suggest you go there and create an account.
2. (*)Print out your [grading sheet](#) or use the [Excel](#) version.
3. Complete the [warm up problems](#).
4. Record up to 3 points for at least three correct answers.
5. Review [order of operations](#) when evaluating expressions.
6. Click on the two video examples on [expressions, simplifying and evaluating](#). Pause the video and try the examples yourself. Then watch to check your answers.
7. Take the quiz on [expressions](#). These types of quizzes are really like your homework. If you need to go back and look at the lesson, it's okay to do that. It's not cheating.
8. Record your score out of 7.

Day 2

1. Do the [warm up problems](#).
2. Record up to 3 points for at least three correct answers.
3. Review the [properties of numbers](#).
4. Watch the video on the [types of numbers](#).
5. Here is a page reminder of [rational and irrational numbers](#).
6. Identify the [rational/irrational numbers](#).

Day 3

1. Do the [warm up problems](#).
2. Record up to 3 points for at least three correct answers.
3. Read about the [parts of the graph](#) and answer questions one through five.
4. Record your score out of 5.
5. Review [averages](#) by reading the pages and take the [quiz](#) when you are done. (Remember, you can use a calculator.)
6. Record your score out of 10.

Day 4

1. Find the mean, median, mode, and range of 13, 25, 7, 28, 42, 7, 15, 23, 1, 17.
2. Answers: (17.8, 16, 7, 41) (This is warmup topic 1.4)
3. Record up to 3 points for at least three correct answers.
4. Try [solving equations](#). Do the first seven.
5. Check your answers and go over the solutions to any you got wrong.
6. Now [solve the equations](#).
7. Check your answers.

8. Record your score out of 5.

Day 5

1. Do you remember that [absolute value](#) is always positive. Use the link for a quick review.
2. Watch the [video](#) and use the [worksheet](#) to take notes on absolute value equations.
3. Take the [quiz](#).
4. Record your score out of 9.

Day 6

1. Read about [solving absolute value equations](#).
2. Read about [graphing absolute value equations](#).
3. Play with the [graph](#) on the page and make observations. Type in $\text{abs}(x)$ or some other function with absolute value. Change the values by using the sliders. How does the graph change? How does it stay the same?
4. Solve the [absolute value equations](#).
5. Check your answers and review the solutions of any you got wrong.
6. Take the [quiz on solving absolute value equations](#).
7. Record your score out of 5 (potential for extra credit).

Day 7

1. Do the [warm up problems](#) on solving absolute value equations.
2. Record up to 3 points for at least three correct answers.
3. Read about [solving inequalities](#) and do the first five questions. If you get one wrong, do one more.
4. Go over the two examples of solving inequalities with [and](#) / [or](#).
5. Take the [quiz on solving inequalities](#). (Just a reminder that all of these types of “quizzes” you can use your notes while you take them. This is like homework or an in-class assignment.) In number three it uses the symbol for infinity, it looks like a sideways 8.
6. Record your score out of 5 (potential for extra credit). (My calculus teacher gave us an extra credit point every time we wrote a problem on the board. We could basically get one point every day.)

Day 8

1. Do the [warm up problems](#) on solving inequalities.
2. Record up to 3 points for at least three correct answers.
3. Read about [solving absolute value inequalities](#).
4. Go over the example problem of [solving absolute value inequalities](#).
5. Take the [quiz](#).

6. Record your score out of 6 (potential for extra credit).

Day 9 Review — test questions will come from these exercises

1. Do these exercises for review.

- [one](#)
- [two](#)
- [three](#)
- [four](#)

Day 10(*)

1. Continue some review.

- [one](#)
- [two](#)

1. (*)Take the short [test](#). When you take a test, you have to close your notebook and all of your tabs/windows on your computer.
2. Check your [answers](#).
3. Record your score out of 14. (up to two points for each)
4. ALWAYS hold onto your written tests. You can use these for review later.

Day 11

1. Do the [warm up problems](#) on solving absolute value inequalities.
2. Record up to 3 points for at least three correct answers.
3. Go through the video presentation on [relations and functions](#). (Remember that you can always pause a video to try a problem before it shows you the answer.)
4. Go through the video and try the examples to find the [domain and range](#).
5. Read about [functions and relations](#).
6. Try the example with using the [vertical line test](#).
7. Try the example with finding the [domain and range](#).
8. Use graphs to [find the domain and range](#).
9. Record 5 points for completing #8 (first 4 correct or 5 correct in a row).

Day 12

1. Do the [warm up problems](#) on domain and range.
2. Record up to 3 points for at least three correct answers.
3. Read about [linear equations](#) (or the equation of a straight line). You don't need to use the links on the page.
4. Do questions one through five.
5. Record up to 5 points for your correct answers.
6. Play more with making a [graph from an equation](#). Make the graphs of the example equations by clicking and dragging the points on the graph.

7. Record 5 points for making each of the five equations. Take off a point for any you couldn't make.
8. Go through this video presentation on [linear equations](#).

Day 13*

1. *Print out this [worksheet](#) to use to take notes as you watch the [video on slope](#).
2. Take the [quiz](#).
3. Record your score out of 10.

Day 14

1. Watch the video presentation on [linear functions](#).
2. Read about [making a T chart](#).
3. Read through the lesson on [slope and y-intercept](#) in word problems.
4. Work through the examples.
5. Do the quiz on [linear equations](#).
6. Record your score out of 5.

Day 15

1. Do the [warm up problems](#) on linear equations.
2. Record up to 3 points for at least three correct answers.
3. Review [slope](#).
4. Read about the other form of writing the equation of a straight line, [point-slope form](#).
5. Try the five questions.
6. Try the examples of writing equations in [point-slope form](#).
7. Try this [example](#) as well.
8. Take the [slope quiz](#).
9. Record your score out of 5 (potential for extra credit).

Day 16

1. Do the [warm up problems](#) on slope.
2. Record up to 3 points for at least three correct answers.
3. Take the [linear equation test](#).
4. Record your score out of 7.
5. Read through this lesson on finding [parallel and perpendicular lines](#). (Prefer a [video](#)?)
6. Play with the [applet on finding parallel and perpendicular lines](#).
7. Do these examples of [finding parallel and perpendicular lines](#).
8. Take the writing [linear equations quiz](#).
9. Record your score out of 7 (potential for extra credit).

Day 17

1. A little review...
2. Do the [presentation on functions](#) (or read the topic text). Then do the practice and review.
3. Record your review score out of 6.

Day 18

1. Do the warm up, presentation or topic text, practice and review on [evaluating functions](#). You shouldn't need the worked examples, but use them if you do.
2. Record your review score out of 2.

Day 19

1. Do the presentation or topic text, worked examples as necessary, practice and review on [graphing types of functions](#). (You may have to think back to algebra 1 for some of this. Don't freak out about it! We're not recording grades today and on Day 20.)

Day 20

1. Do the presentation or topic text, worked examples as necessary, practice and review on [finding domain and range](#).

Day 21

1. Do the [warm up problems](#) on writing linear equations.
2. Record up to 3 points for at least three correct answers.
3. Learn about [scatter plots](#) and answer the questions.

Day 22

1. Try the [scatterplot questions](#).
2. Record up to 5 points for at least five correct answers.
3. Watch the video on graphs of [absolute value functions](#).
4. Watch the [example exercise](#).
5. [Make the graphs](#) at :45 and 1:36 and then watch further to check your answers.
6. Go through the example of [graphing absolute value functions](#).
7. Get five [absolute value graphs](#) correct.
8. Record your score out of 5.

Day 23

1. Learn about the greatest integer function, step functions and floor and ceiling functions. How are they all related?
 - [two minute video](#)
 - [four minute video](#)
 - Read about [floor and ceiling functions](#) and answer the questions. These are types of step functions.
 - An identity function returns the value inputted, so if you put in 1 for x, y is 1. If you put in -5 for x, then y is -5.
 - The [graph of an identity function](#) looks like this.
 - A [piecewise](#) function has a graph that is broken in pieces. It looks like this.
 - A constant function returns the same number for y no matter what x you put in. What would its [graph](#) look like?
 - Identify the [graphs](#).

Day 24

1. Learn about [graphing inequalities](#).
2. Try the [example](#) of graphing linear inequalities.
3. Here are some [more examples](#) to try.
4. Take the [linear inequalities quiz](#).
5. Record your score out of 4. (potential for extra credit)

Day 25 Review — test questions will come from these review problems

1. Do these problems for review.
 - [one](#)
 - [two](#)
 - [three](#)
 - [four](#)
 - [five](#)
1. Your test on Day 26 will only cover these items. A cumulative test will come later.

Day 26(*)

1. Continue to review with these [problems](#).
2. (*) Take your [test](#).
3. Check your [answers](#).
4. ALWAYS hold onto your written quizzes. You can use these for review later.
5. Record your score out of 5.

Day 27

1. Do the [warm up problems](#) on graphing linear inequalities.
2. Record up to 3 points for at least three correct answers.

3. *Print out the [worksheet](#) to take notes while you watch the video on [solving systems of equations](#) using graphing.

Day 28

1. Go through the video presentation on [solving systems of equations graphically](#). Work through the examples.
2. *If you want a [more detailed lesson](#), here is one.*
3. Try this [example](#) of solving a system of equations graphically. Try it first.
4. Do [practice problems](#).
5. Take the [quiz](#).
6. Record your score out of 3.

Day 29*

1. *Print out the [worksheet](#) to take notes while you watch.
2. Watch the video on [solving systems of equations](#) using the elimination method.

Day 30

1. Do the [warm up problems](#) on graphing systems of equations.
2. Record up to 3 points for at least three correct answers.
3. Scroll down to the section on "[Solving by Substitution](#)." Read that section and work through the examples.
4. Here's another lesson on [solving by substitution](#).
5. Write an algebraic expression to solve the [pencil and jar puzzle](#).
6. When you have tried a solution, check your answer. 2 points for the correct answer for the first problem and 5 points for a correct answer for the second. (All extra credit points, record them out of 0.)

Day 31

1. Do two math problems for [SAT practice](#). (You may choose to create a free account.)
2. Study this page on [systems of equations](#). Stop when it gets to three variables. You don't need to learn that right now. Take notes on the vocabulary (ie. "consistent," "dependent," etc.)
3. Answer questions 1-8 at the bottom of the page.
4. Record your score out of 7. (potential for an extra credit point)
5. Watch this lesson on [classifying systems of equations](#).
6. Solve these [systems of equations](#).
7. Record your score out of 4, one point for the graph and one point for the answer.

Day 32

1. Do two math problems for [SAT practice](#).
2. Do the [warm up problems](#) on solving systems of equations algebraically.
3. Record up to 3 points for at least three correct answers.
4. Watch this lesson on [evaluating a determinant](#).
5. Go through this lesson on [Determinants and Cramer's Rule](#).
6. Try the quiz on [Cramer's Rule](#).
7. Record your score out of 4.

Day 33

1. Let's do review games.
 - [absolute value equations](#)
 - [solving equations](#)
 - [slope-intercept](#) At least do the middle column of finding the intercept.
 - [write the line equation](#) There are 2 levels. Plot two points to graph the line.

Day 34

1. More review games!
 - Can you write a system of equations to figure these [puzzles](#) out?
 - [linear equations](#)
 - [solving equations](#)

Day 35

1. Do two math problems for [SAT practice](#).
2. Do the [warm up problems](#) on Cramer's Rule.
3. Record up to 3 points for at least three correct answers.
4. A little review of graphing inequalities and then we'll look at systems of inequalities.
5. Read about [graphing inequalities](#).
6. Practice [graphing and solving inequalities](#). (There's a video if you want extra help.)

Day 36

1. Do two math problems for [SAT practice](#).
2. Work through this example of solving [systems of inequalities with graphs](#).
3. Try [solving systems of inequalities with graphs](#). (There's a video if you want extra help.)
4. Try the [quiz](#).
5. Record your score out of 3. (potential for extra credit)

Day 37

1. Do two math problems for [SAT practice](#).
2. Do the [warm up problems](#) on solving inequalities graphically.
3. Record up to 3 points for at least three correct answers.
4. Watch the video on [absolute value inequalities](#).
5. Try these two problems. Pause the video, copy down the problem, solve it and then watch the solution.
 - [one](#)
 - [two](#)

Day 38

1. Do two math problems for [SAT practice](#).
2. Watch the video on [graphing absolute value](#).
3. Watch the video on [graphing absolute value equations](#).
4. Watch the video on [graphing systems of inequalities](#).
5. Watch the video example of [graphing systems of inequalities with no solution](#).
6. Do the practice on [graphing systems of inequalities](#).
7. Record your score out of 13. If you got them all right, score 13. Score 12 for 1 wrong. Score 11 for 2 wrong. Score 10 for finishing the activity.

Day 39

1. Click on each [type of transformation](#) in the list (translation, reflections, dilation, rotation). Read the lesson and then try the practice examples. Use graph paper and then check your answers.

Day 40

1. Read this lesson on [translations with matrices](#).
2. Try some [example problems](#). Pause and try what you can before you view the solutions.

Day 41

1. Do two math problems for [SAT practice](#).
2. I took a course in college that used linear programming. We solved systems of equations in order to figure out where companies should distribution centers, how many employees a company should have, etc. We wrote as many equations as we could to put in as much information into the decision as possible and solved. These are the constraints, the limitations our decision was bound by. (The company will only spend a certain maximum amount of money on each employee, or only wants so many trucks in operation, etc.) You'll be doing a smaller version of that today.
3. Go through these examples of [linear programming](#).

4. Try this [example problem](#) in linear programming.
5. Take the [quiz](#). (Enlarge the images to see them better. Use ctrl + on Windows, your fingers on a mobile device, etc.)
6. Record your score out of 5 (potential for extra credit).

Day 42

1. Do two math problems for [SAT practice](#).
2. Do the [warm up problems](#) on linear programming.
3. Record up to 3 points for at least three correct answers.
4. Go through the example on this presentation of [linear programming used to solve problems](#).
5. Go through this [example](#) as well. (At the end, the three dots in a triangle shape mean “therefore.”)
6. Go through one more [example problem](#).
7. Take the [quiz](#).
8. Record the score out of 5.

Day 43*

1. Do two math problems for [SAT practice](#).
2. Do the [warm up problems](#) on linear programming problems.
3. Record up to 3 points for at least three correct answers.
4. *Print out this [worksheet](#) to take notes as you watch the video below.
5. Watch the [video lesson](#) on solving systems of equations with three variables.

Day 44

1. Do two math problems for [SAT practice](#).
2. Do the three [video lesson examples](#) on solving equations with three variables. Click on each one. They will open in new windows.
3. Scroll down the page and learn about [solving systems of equations with three variables](#). Do questions 9 and 10 at the bottom of the page.
4. Do one of these [problems](#) (without looking at your notes).
5. Check your answers (using your notes from the video on Day 43) when you are done.

Day 45 Review — test questions will come from these problems

1. Use these problems to review for a test on Day 46.
 - [one](#)
 - [two](#)
 - [three](#)
 - [four](#)

- [five](#)
- [six](#)

Day 46(**)

1. Do two math problems for [SAT practice](#).
2. Continue your review by solving these [linear programming word problems](#).
3. (*)Take your [test](#).
4. Check your [answers](#).
5. Record your score out of 10. (up to two points for each problem)

Day 47*

1. Do two math problems for [SAT practice](#).
2. *Print out this [worksheet](#) to take notes on as you watch the video below.
3. Watch this short video on [matrices](#). (look familiar?)
4. Take the quiz on matrices. (This quiz isn't working. Here's an [alternate quiz](#).)
5. Watch this presentation on [identifying elements in a matrix](#).

Day 48

1. Do two math problems for [SAT practice](#).
2. Find the [determinant of the matrices](#).
3. Answer the questions at the bottom of the page.
4. Do page one of this [worksheet](#) packet on matrices. Write in definitions of the bold faced words. (Search online if necessary, but you can probably just use your brain! Write the dimensions of the example matrices and do the problem at the bottom of the page.
5. Hold onto your written work for your portfolio. Figure out your grade for the first quarter.

Day 49

1. (*)Print out your [grading sheet](#) or use the [Excel](#) version.
2. Do two math problems for [SAT practice](#).
3. Watch all of the tutoring sessions on [adding matrices](#).
4. Practice [adding and subtracting matrices](#).
5. Record your score out of 4.
6. Watch all the tutoring sessions on [multiplying matrices](#).
7. Take the [quiz](#).
8. Record your score out of 5 (potential for extra credit).

Day 50

1. Do two math problems for [SAT practice](#).

2. Watch the lesson on [solving an equation containing a matrix](#).
3. Do pages two and three of the [matrix worksheet packet](#).
4. Check your [answers](#).
5. Record your score out of 14.

Day 51

1. Go through these pages on solving determinants.
 - [one](#)
 - [two](#)
1. Do pages four and five of the [matrix worksheet packet](#). Do the numbered problems (nine of them).
2. Check your [answers](#).
3. Record your score out of 9.
4. Do you remember Cramer's Rule?

Day 52

1. Do two math problems for [SAT practice](#).
2. Watch the [video lesson](#) on finding the inverse of a matrix.
3. Learn about the [inverse and identity of a matrix](#).
4. Try the questions at the bottom of the page.

Day 53

1. Do two math problems for [SAT practice](#).
2. Do pages six and seven of the [matrix worksheet packet](#). Do the example problems (five of them).
3. Check your [answers](#).
4. Record your score out of 5.
5. Take the [quiz](#).
6. Record your score out of 5. (potential for extra credit)

Day 54

1. Do two math problems for [SAT practice](#).
2. Take the [quiz](#) on determinants.
3. Record your score out of 4.
4. Take the quiz on the [inverse of a matrix](#).
5. Record your score out of 5 (potential for extra credit).
6. Do one more [quiz on the inverse](#).
7. Record your score out of 5.

Day 55

1. Do two math problems for [SAT practice](#).
2. Watch the three video lesson examples of [using matrices to solve systems of equations](#).
3. Take the [quiz](#).
4. Add a point. Record your score out of 4.
5. Solve the [matrix equations](#).
6. Record your score out of 5.

Day 56

1. Do two math problems for [SAT practice](#).
2. Review [Cramer's Rule](#).
3. Apply [Cramer's Rule](#) to three equations.
4. Practice [Cramer's Rule](#).
5. You can go through the example and then try to solve these [three by three equations](#) with Cramer's Rule. (I don't have answers for these. Give them a try. They are at the end of the lesson.)

Day 57

1. Do two math problems for [SAT practice](#).
2. Learn about [augmented matrices and using elementary row operations to find the inverse of a matrix](#).
3. Read and answer the questions at the bottom of the page.

Day 58

1. Do two math problems for [SAT practice](#).
2. Record 3 points for completion.
3. Watch the lesson on [writing systems](#) from augmented matrices. Try the examples.
4. Watch the lesson on [using an augmented matrix](#).
5. Take the quiz on [using augmented matrices](#).
6. Record your score out of 5.

Day 59

1. Do two math problems for [SAT practice](#).
2. Learn about [box and whisker plots](#).
3. Try the [example](#) and then watch the solution.
4. Answer the [word problems](#). (If we can't use those, do [three correct in a row of these problems](#).)

Day 60

1. Do two math problems for [SAT practice](#).
2. Read the page on [exponent properties](#).
3. Answer [questions 1-10](#). Use the page as necessary to remind yourself of the rules.
4. Record your score out of 10. (potential for extra credit)
5. You can do any of the “hard” problems for extra credit points if you get them right.

Day 61

1. Do two math problems for [SAT practice](#).
2. Read about [simplifying expressions with exponents](#).
3. Answer the [questions](#) for practice.
4. Try this [exponents quiz](#).
5. Record your score out of 10.

Day 62

1. Do two math problems for [SAT practice](#).
2. Simplify the [expressions](#).
3. Record your score out of 5.
4. Watch the lesson on [classifying polynomials](#).
5. Watch the lesson on [modeling data](#).
6. Read the lesson and look at the graphs, [graphing exponential functions](#). What do you notice? (You don't need to copy down these problems.)
7. Draw the graph of $(1/3)^{-x}$ to the $-x$ power. (You can refer to the lesson as necessary?)
8. Check your [answer](#).
9. Record up to 5 points for a correct graph.

Day 63

1. Do two math problems for [SAT practice](#).
2. Read about [polynomials](#).
3. Answer the [questions](#).
4. Record your score out of 10.

Day 64

1. Do two math problems for [SAT practice](#).
2. Read about [adding and subtracting polynomials](#).
3. Answer the [questions](#).
4. Record your score out of 10.
5. Simplify the [expressions](#). Do numbers 1, 2, 4, and 5.

6. Record your score out of 4.

Day 65

1. Do two math problems for [SAT practice](#).
2. Read about [multiplying polynomials](#).
3. Answer the [questions](#) 1 through 10.
4. Add an [extra credit](#) point if you can get this one.
5. Record your score out of 10.
6. Take the [polynomials quiz](#) and record your score out of 5.

Day 66

1. Do two math problems for [SAT practice](#).
2. Read about [polynomial long multiplication](#).
3. Answer [questions](#) one through ten.
4. Record your score out of 10.

Day 67*

1. Do two math problems for [SAT practice](#).
2. *Print out this [worksheet](#) to take notes while you watch the video.
3. Watch the video on [dividing polynomials with long division](#).
4. Try the [quiz](#). Do numbers 8-13. If you get one wrong, you can try another problem to try to earn back that point.)
5. Record your score out of 6. Record eight if you have a six because that means you either knew your stuff or you didn't give up and kept trying.

Day 68

1. Do two math problems for [SAT practice](#).
2. Solve using [long division](#).
3. Record your score out of 5.
4. Watch the five lessons on [factoring trinomials](#). Remember to pause and try things first when you can.

Day 69

1. Do two math problems for [SAT practice](#).
2. Factor these [completely](#).
3. Record your score out of 5. (together with the quiz below)
4. *Print this [worksheet](#) to take notes as you watch the video.
5. Watch the video on [synthetic division](#).
6. Take the [quiz](#).

7. Record your score out of 8.

Day 70

1. Do the warm up, presentation, worked examples (as necessary) and practice on the [introduction to rational expressions](#).
2. Record your score out of 5 for the practice.

Day 71

1. Do the [review](#) from the introduction. (introduction to rational expressions)
2. Do the warm up, presentation, worked examples (as necessary) and practice on [multiplying and dividing rational expressions](#).
3. Record your score out of 5 for the practice.

Day 72

1. Do the [review](#) from Day 71's topic.
2. Do the warm up, presentation, worked examples (as necessary) and practice on [adding and subtracting rational expressions](#).
3. Record your score out of 5 for the practice.

Day 73

1. Do the [review](#) from Day 72's topic.
2. Do the warm up, presentation, worked examples (as necessary) and practice on [complex rational expressions](#).
3. Record your score out of 5 for the practice.

Day 74

1. Do the [review](#) from Day 73's topic.
2. Do the warm up, presentation, worked examples (as necessary) and practice on [solving rational equations and applications](#).
3. Record your score out of 5 for the practice.

Day 75

1. Do the [review](#) from Day 74's topic.
2. Do the warm up, presentation, worked examples (as necessary) and practice on [rational formulas](#).
3. Record your score out of 5 for the practice.

Day 76

1. Do two math problems for [SAT practice](#).

2. Do the [review](#) from Day 75's topic.
3. Do the tutoring session on [profits and the rising cost of fuel](#).
4. Try the [game](#).

Day 77

1. Read the lesson and answer the [questions](#) on [rational expressions](#).
2. Record your score out of 8. (potential for extra credit)

Day 78

1. Read the page and answer the [questions](#) on [using rational expressions](#).
2. Record your score out of 8. (potential for extra credit)

Day 79

1. Do the warm up, presentation, worked examples (as necessary) and practice on [roots](#).
2. Record your score out of 5 for the practice.

Day 80

1. Do the review section from [roots](#).
2. Do the warm up, presentation, worked examples (as necessary) and practice on [multiplying and dividing radical expressions](#).
3. Record your score out of 5 for the practice.

Day 81

1. Do the review section from [Day 80](#).
2. Do the warm up, presentation, worked examples (as necessary) and practice on [adding and subtracting radicals](#).
3. Record your score out of 5 for the practice.

Day 82

1. Do the review section from [Day 81](#).
2. Do the warm up, presentation, worked examples (as necessary) and practice on [multiplying multiple term radicals](#).
3. Record your score out of 5 for the practice.

Day 83

1. Do the review section from [Day 82](#).
2. Do the warm up, presentation, worked examples (as necessary) and practice on [rationalizing denominators](#).

3. Record your score out of 5 for the practice.

Day 84

1. Do the review section from [Day 83](#).
2. Do the warm up, presentation, worked examples (as necessary) and practice on [solving radical equations](#).
3. Record your score out of 5 for the practice.

Day 85

1. Do the review section from [Day 84](#).
2. Do the warm up, presentation, worked examples (as necessary) and practice on [complex numbers](#).
3. Record your score out of 5 for the practice.

Day 86

1. Do the review section from [Day 85](#).
2. Do the warm up, presentation, worked examples (as necessary) and practice on operations on [complex numbers](#).
3. Record your score out of 5 for the practice.

Day 87

1. Do the review section from [Day 86](#).
2. Do the warm up, presentation, worked examples (as necessary) and practice on operations on [square roots and completing the square](#).
3. Record your score out of 5 for the practice.

Day 88

1. Do the review section from [Day 87](#).
2. Do the warm up, presentation, worked examples (as necessary) and practice on operations on the [quadratic formula](#).
3. Record your score out of 5 for the practice.

Day 89

1. Do two math problems for [SAT practice](#).
2. Do the review section from [Day 88](#).
3. Complete the [tutoring session](#).
4. Play the [game](#).

Day 90

1. Do two math problems for [SAT practice](#).
2. Complete these exercises to review.
 - [radicals](#)
 - [roots](#)
 - [roots quiz](#) Record your score out of 5. (potential for an extra credit point)
 - [radical expressions](#)
 - [radical expressions](#) Record your score out of 10.
1. This is the end of the quarter. Figure your final grade. Make sure you save your written work. You can also print a screen shot of the sites we are using. How is your grade? What can you do to improve it?

Day 91

1. Do two math problems for [SAT practice](#).
2. Complete these exercises for review.
 - [rational exponents quiz](#)
 - [solving radical equations quiz](#)

Day 92

1. Do two math problems for [SAT practice](#).
2. Complete these exercises to review.
 - [complex numbers](#)

Day 93(*)

1. Do two math problems for [SAT practice](#).
2. (*) Take your [test](#). Do not use notes.
3. Check your [answers](#).
4. Record your score out of 5.
5. Try some review problems. Do a few from each set.
 - [one](#)
 - [two](#)
 - [three](#)
 - [four](#)
 - [five](#)
 - [six](#)

Day 94

1. Do two math problems for [SAT practice](#).
2. Watch the video on [graphing quadratic functions](#). Take notes.

Day 95

1. (*)Print out your [grading sheet](#) or use the [Excel](#) version.
2. Do two math problems for [SAT practice](#).
3. Do the two problems on this [worksheet](#) without using your notes.
4. Check your notes to see if you did it right. Correct any problems.
5. Take the quiz. (This quiz isn't working. Here's an [alternate quiz](#). Score up to 2 points for each question.)
6. Record your score out of 10.

Day 96

1. Do two math problems for [SAT practice](#).
2. Complete the lesson on [Multiplying Binomials](#).
3. Complete practice problems to check your understanding. If you aren't getting this easily, then try some more by using the [worksheet](#).
4. Complete the [challenge question](#) at the bottom of the page.

Day 97(*)

1. Do two math problems for [SAT practice](#).
2. (*)Print out this [worksheet](#) to use to take notes while you watch the video.
3. Watch the video lesson [solving quadratic functions](#).

Day 98

1. Do two math problems for [SAT practice](#).
2. Complete the lesson on [solving quadratic equations by factoring](#).
 - You have to create a free account. We will be using this again, so please do.
1. Make sure to complete the [practice](#) problems to check your understanding.
2. Check your [answers](#).

Day 99

1. Do two math problems for [SAT practice](#).
2. Here's a review of [solving quadratic equations by factoring](#).
3. Complete the lesson on [solving quadratic equations using square roots](#).
 - You have to create a free account. We will be using this again, so please do.
1. Make sure you do [practice](#) problems to check your understanding.
2. Check your [answers](#).

Day 100

1. Do two math problems for [SAT practice](#).

2. Complete the lesson on [solving quadratic equations by completing the square](#).
 - You have to create a free account. We will be using this again, so please do.
1. Make sure you do [practice](#) problems to check your understanding.
2. Check your [answers](#).

Day 101

1. Do two math problems for [SAT practice](#).
2. Complete the lesson on [using the quadratic formula to solve quadratic equations](#).
 - You have to create a free account. We will be using this again, so please do.
1. Make sure you do some [practice](#) problems to check your understanding.
2. Check your [answers](#).

Day 102

1. Do two math problems for [SAT practice](#).
2. Review [solving quadratics with graphing](#) and take the [quiz](#).
3. Record your score out of 4.

Day 103

1. Do two math problems for [SAT practice](#).
2. Review [solving quadratics by factoring](#).
3. Answer questions 4, 5, 6, 9, and 10.
4. Record your score out of 5.

Day 104

1. Do two math problems for [SAT practice](#).
2. Review about [solving quadratics by completing the square](#).
3. Answer [questions 1-5](#).
4. Record your score out of 5.

Day 105

1. Do two math problems for [SAT practice](#).
2. Review about [solving quadratic equations](#).
3. Answer the [questions](#). (These are linked on the page.)
4. Can you answer any of the [hard ones](#)? (Record up to five extra credit points for up to five correct answers out of the “hard” section.)

Day 106

1. Do two math problems for [SAT practice](#).
2. Solve these [quadratic word problems](#). Try them first and then look through the solutions. There are just the problems on the page. There are no extra questions at the end.

Day 107

1. Do two math problems for [SAT practice](#).
2. Review [solving quadratic equations](#).
3. [Practice](#) solving quadratic equations (just try some). You will do this some more on Day 108. (In practice mode you can see how to solve it line by line if necessary.)
4. Check your [answers](#).

Day 108

1. Do two math problems for [SAT practice](#).
2. Do some more of the [practice](#) solving quadratic equations (just try some) and then take the quiz below. ([source](#))
3. Check your [answers](#).
4. Solve the following [quadratic equations](#).
5. Record your score out of 7.

Day 109*

1. Do two math problems for [SAT practice](#).
2. *Print out this [worksheet](#) to take notes as you watch the video.
3. Watch the video on [complex numbers](#).
4. Complete the [quiz](#).
5. Record your score out of 10.

Day 110

1. Do two math problems for [SAT practice](#).
2. Add, subtract, multiply and divide complex numbers. Use the [practice problems](#).([source](#))
3. Check your [answers](#).

Day 111

1. Do two math problems for [SAT practice](#).
2. Take the [quiz](#) on complex numbers. ([original link](#), click on quiz)
3. Check your [answers](#).

4. Record your score out of 20.

Day 112

1. Do two math problems for [SAT practice](#).
2. Go through this page on the [relationship](#) between the discriminant and the graph of the quadratic equation.
3. What can be observed about the solutions to a quadratic equation based on the discriminant? (3 answers)
4. Use the video lessons on the quadratic formula and the discriminant.
 - [Solving quadratic equations using the quadratic formula](#)
 - [Using the discriminant to find the number of solutions and solve problems](#)

Day 113

1. Do two math problems for [SAT practice](#).
2. Use the video lesson on [solving quadratic equations using the quadratic formula, complex solution](#).
3. Take the [quiz](#).
4. Record your score out of 5.

Day 114

1. Do two math problems for [SAT practice](#).
2. Do the warm up on the [quadratic formula and discriminant](#).
3. Record up to three points for up to three correct answers.
4. Take the quiz on the [sum and product of roots](#).
5. Record your score out of 5. (potential for an extra credit point)
6. Review [solving by factoring](#).

Day 115

1. Do two math problems for [SAT practice](#).
2. Do the warm up on the [sum and product of roots](#).
3. Record up to three points for up to three correct answers.
4. Take the quiz on [graphing parabolas](#).
5. Use the [lessons](#) if necessary.
6. Record your score out of 6.

Day 116

1. Do two math problems for [SAT practice](#).
2. Read the lesson on [graphing quadratic inequalities](#) and try the practice problem.
3. Take the quiz on [graphing quadratic inequalities](#).

4. Record your score out of 3.

Day 117

1. Do two math problems for [SAT practice](#).
2. Use the following exercises to review for a quiz.
 - [quadratic formula and discriminant](#)
 - [sum and product of roots](#)
 - [analyzing graphs of quadratics](#)

Day 118(*)

1. Do two math problems for [SAT practice](#).
2. Continue your review with this exercise on [graphing quadratic inequalities](#).
3. (*)Take your [quiz](#).
4. Check your [answers](#).
5. Record your score out of 5.

Day 119

1. Do two math problems for [SAT practice](#).
2. Watch the video lesson on the [distance formula](#).
3. Do [questions one through five](#) at the bottom of the page. Use the lesson on the page as necessary.

Day 120

1. Do two math problems for [SAT practice](#).
2. Read the lesson on the [midpoint formula](#).
3. Find the [midpoint](#). Answer questions one through seven.

Day 121

1. Do two math problems for [SAT practice](#).
2. Use the distance and midpoint formulas to complete these exercises.
 - [review](#)
 - [quiz](#)
 - Record your score out of 5.

Day 122(*)

1. (*)Use this [worksheet](#) to take notes while you watch the video.
2. Watch the video lesson on [conic sections with parabolas](#).
3. Try the [quiz](#).

Day 123(*)

1. (*)Use this [worksheet](#) to take notes as you watch the video.
2. Watch the video lesson on [conic sections and circles](#).
3. Read the lesson on the [equation of a circle](#) and answer the questions.

Day 124

1. You may use your notes for these.
2. Take quiz on [parabolas](#).
3. Record your score out of 10.
4. Take the quiz on [circles](#).
5. Record your score out of 10.

Day 125(*)

1. (*)Use this [worksheet](#) to take notes while you watch the video.
2. Watch the video lesson on [conic sections with ellipses](#).
3. Try the [quiz](#).

Day 126(*)

1. Look at the images of the [conic sections of a cone](#). ([source](#))
2. (*)Use this [worksheet](#) to take notes while you watch the video.
3. Watch the video lesson on [conic sections with hyperbola](#).

Day 127

1. Take the quiz on [ellipses](#).
2. Record your score out of 10.
3. Take the quiz on [hyperbola](#).
4. Record your score out of 10.

Day 128

1. Watch the video lesson on [identifying conics](#).
2. Take the [quiz](#).
3. Record your score out of 7.

Day 129

1. Do two math problems for [SAT practice](#).
2. Review [solving systems of equations](#) algebraically.
3. Solve the [systems of equations](#).
4. Record your score out of 5. (potential for extra credit)

5. Review all of your written quizzes.

Day 130

1. Do two math problems for [SAT practice](#).
2. We are going to be focusing again on functions. This is part review and then we will be looking at polynomial functions.
3. [Review functions](#) with this lesson.
 - You have to create a free account. We will be using this again, so please do.

Day 131

1. Do two math problems for [SAT practice](#).
2. Do this lesson on [operations on functions](#).
3. Answer the [questions](#) at the bottom of the page. The “hard” questions are extra credit.
4. Record your score out of 4.

Day 132

1. Do two math problems for [SAT practice](#).
2. Use the lesson links to learn about the [composition of functions](#).
3. Practice by completing all parts of numbers 1-3.
4. Score up to three points for problems two and three and up to four for the first problem.
5. Record your score out of 10.

Day 133

1. Do two math problems for [SAT practice](#).
2. Complete the practice on the [composition of functions](#), completing all parts from questions 4-10.
3. There are twenty questions.
4. Record your score out of 20.

Day 134

1. Do two math problems for [SAT practice](#).
2. Read about the [inverse of a function](#) and answer questions 1-3. (If you are up to the challenge, try question 6. Give yourself an extra credit point if you get number 6 correct.)
3. NOTE! Don't worry about the sine, cosine, tangent words. That's trigonometry.

Day 135(*)

1. (*)Use this [worksheet](#) to take notes as you watch the video.
2. Watch the [video lesson on polynomial functions](#).
3. Take the quiz on [polynomial functions](#).
4. Record your score out of 9. (potential for an extra credit point)
5. Figure out your third quarter grade. Hold onto your written work. You can use screen shots to show the websites you are using as well. How is your grade? How can you improve it?

Day 136(*)

1. (*)Print out your [grading sheet](#) or use the [Excel](#) version.
2. Do two math problems for [SAT practice](#).
3. Watch the [presentation on increasing and decreasing functions](#). Answer the practice questions before you look at the answers!
4. Learn about [asymptotes](#).
5. Learn about [vertical](#) and [horizontal](#) asymptotes.
6. Use the [presentation on asymptotes](#) and try the practice problems (before you look at the answers!)

Day 137

1. Do two math problems for [SAT practice](#).
2. Practice [polynomial functions](#).
3. Practice [asymptotes](#).
4. Take the [quiz](#) and record your score out of 5.

Day 138

1. Do two math problems for [SAT practice](#).
2. Learn about the [remainder and factor theorems](#) and answer the first five questions.

Day 139

1. Do two math problems for [SAT practice](#).
2. Learn about the [fundamental theorem of algebra](#) and answer the first five questions.

Day 140

1. Do two math problems for [SAT practice](#).
2. Explore with the [graph](#).
3. [Practice](#).
4. Take the [quiz](#).

5. Record your score out of 5. Take one point off (of 5) for any incorrect answers.

Day 141

1. Do two math problems for [SAT practice](#).
2. Read through the lesson on [roots and zeros of polynomials](#).
3. Go through the video lesson on the [root theorem](#).

Day 142

1. Do two math problems for [SAT practice](#).
2. Go through the video lesson on [solving equations with the root theorem](#).
3. Go through the video lesson on the [irrational root theorem](#).

Day 143

1. Do two math problems for [SAT practice](#).
2. Go through the video lesson on [finding the imaginary root](#).
3. Go through the video lesson on [writing a polynomial from its roots](#).

Day 144

1. Do two math problems for [SAT practice](#).
2. [Practice](#).
3. Take the [roots and zeros quiz](#).
4. Record your score out of 5. (potential for an extra credit point)

Day 145

1. Do two math problems for [SAT practice](#).
2. Do you need a reminder from the lesson on [roots and zeros](#).
3. Give it a [try](#). (8.6)

Day 146

1. Do two math problems for [SAT practice](#).
2. Read about [solving polynomials](#) and answer the first five questions.

Day 147

1. Do two math problems for [SAT practice](#).
2. Go through the example of [solving polynomials by graphing](#).
3. Go through the example of [solving polynomials](#) by factoring and the quadratic formula.

Day 148

1. Do two math problems for [SAT practice](#).
2. Go through the example of [solving polynomials](#) of higher degrees by factoring.
3. [Practice](#).
4. [Review](#).

Day 149

1. Do two math problems for [SAT practice](#).
2. Take this review [quiz](#) and record your score out of 5.
3. Read the lesson on [factorials](#).
4. Answer the first three [questions](#) at the bottom of the page.

Day 150(*)

1. Do two math problems for [SAT practice](#).
2. (*)Print this [worksheet](#) to take notes on while you watch the video.
3. Watch the video on [permutations](#).

Day 151(*)

1. Do two math problems for [SAT practice](#).
2. (*)Use this [worksheet](#) to take notes on while you watch the video.
3. Watch the video on [combinations](#).

Day 152

1. Do two math problems for [SAT practice](#).
2. Read about [the Binomial Theorem](#). Answer the questions. Do numbers 1-7. You can do numbers 8-10 as extra credit problems.
3. Record your score out of 7. (potential for up to three points of extra credit)

Day 153

1. Read about [Euler's number](#) and answer the three questions on the bottom of the page.
2. Record your score out of 3.
3. Give yourself an extra credit point if you can say the first 16 digits of Euler's number.
4. Review [permutations](#) and answer the four exercises.
5. Record your score out of 4.
6. Review [combinations](#) and answer the three parts to Example 5.
7. Record your score out of 3.

Day 154

1. Read about [sequences](#).
2. Read about finding a [pattern in a sequence](#).
3. Answer [questions 1-5](#) at the bottom of the page.
4. Record your score out of 5.

Day 155

1. Do two math problems for [SAT practice](#).
2. Read about [arithmetic sequences](#).
3. Answer the [questions](#) at the bottom of the page.
4. Record your score out of 9. (The tenth question is an extra credit question.)

Day 156

1. Do two math problems for [SAT practice](#).
2. Read about [geometric sequences](#).
3. Answer [questions 1-7](#) at the bottom of the page.
4. Record your score out 7.

Day 157

1. Do two math problems for [SAT practice](#).
2. Read about the [Fibonacci Sequence](#).
3. Answer [questions 1-5](#).
4. Read this [introduction to logarithms](#) or choose the top video from the left sidebar.

Day 158

1. Watch the [video tutorial](#) on arithmetic sequences.
2. Take the [quiz](#) on arithmetic sequences.
3. Record your score out of 5. (potential for extra credit)
4. Watch the [video tutorial](#) on geometric sequences.
5. Take the [quiz](#) on geometric sequences.
6. Record your score out of 5. (potential for extra credit)

Day 159

1. Do these [word problems](#) involving arithmetic and geometric sequences and series.
2. You can refer to these [review lessons](#) if necessary.
3. Record your score out of 5. (potential for an extra credit point)
4. Practice with the [binomial theorem](#).
5. Refer to the [review lesson](#) if necessary.

6. Record your score out of 5.

Day 160

1. Do the warm up, presentation (or text), worked examples (as necessary) and practice on [exponential functions](#).
2. Record your score out of 5 for the practice.

Day 161

1. Do the [review](#) from exponential functions.
2. Do the warm up, presentation, worked examples (as necessary) and practice on [logarithmic functions](#).
3. Record your score out of 5 for the practice.
4. Your final exam does not include logarithms.

Day 162

1. Do the [review](#) from logarithmic functions.
2. Do the warm up, presentation, worked examples (as necessary) and practice on [properties of logarithmic functions](#).
3. Record your score out of 5 for the practice.

Day 163

1. Do the [review](#) from properties of logarithmic functions.
2. Do the warm up, presentation, worked examples (as necessary) and practice on [natural and common logarithms](#).
3. Record your score out of 5 for the practice.

Day 164

1. Do the [review](#) from natural and common logarithms.
2. Do the warm up, presentation, worked examples (as necessary) and practice on [solving exponential and logarithmic equations](#).
3. Record your score out of 5 for the practice.

Day 165

1. Do the [review](#) from solving exponential and logarithmic equations.
2. Do the warm up, presentation, worked examples (as necessary) and practice on [mathematical modeling with logarithmic functions](#).
3. Record your score out of 5 for the practice.

Day 166

1. Do the [review](#) from mathematical modeling.
2. Use the [tutoring session](#).

Day 167

1. Do the warm up, presentation, worked examples (as necessary) and practice on [identifying the six trigonometric functions](#).
2. Record your score out of 5 for the practice.

Day 168

1. Do the [review](#) from identifying the trigonometric functions.
2. Do the warm up, presentation, worked examples (as necessary) and practice on [right triangle trigonometry](#).
3. Record your score out of 5 for the practice.

Day 169

1. Do the [review](#) from right triangle trigonometry.
2. Do the warm up, presentation, worked examples (as necessary) and practice on [unit circle trigonometry](#).
3. Record your score out of 5 for the practice.

Day 170

1. Do the [review](#) from unit circle trigonometry.
2. Do the warm up, presentation, worked examples (as necessary) and practice on [degree and radian measure](#).
3. Record your score out of 5 for the practice.

Day 171

1. Do the [review](#) from degree and radian measure.
2. Do the warm up, presentation, worked examples (as necessary) and practice on [graphing the sine and cosine functions](#).
3. Record your score out of 5 for the practice.

Day 172

1. Do the [review](#) from graphing the sine and cosine functions.
2. Do the warm up, presentation, worked examples (as necessary) and practice on [amplitude and period](#).
3. Record your score out of 5 for the practice.

Day 173

1. Do the [review](#) from amplitude and period.
2. Use the [tutoring session](#).
3. Logarithms are not on your final exam.

Day 174

1. One last topic. We're going to review our data analysis and look at couple new things related to it.
2. Review.
 - [mean, median, mode](#)
 - [scatter plots](#)
 - [box and whiskers](#)

Day 175

1. Read about [standard deviation](#) and variance and answer the questions.

Day 176

1. Read about [z scores](#).
2. Read about [calculating z scores](#).
3. Watch the video on [finding z scores](#).
4. [Practice](#).

Day 177

1. Take the [quiz on standard deviation and z scores](#).
2. Record your score out of 30.
3. Use this test for [review](#). This is a good example of the types of problems that will be on your final.
4. Take note of what things you can't remember. You will have your final exam on Day 180.
5. In the test it says, "feasible region," which I didn't remember from the course (maybe you recognize it). It's not something new. Here's one explanation I found online. "Draw all of your lines. According to the inequality, shade above or below for every line. The feasible region, or solution region is a shared region that all of the lines have in common." The *apparent solution set* is just what appears to be the solution set.

Day 178 – 179

1. Study for your final exam on Day 180. Review topics that you jotted down yesterday as things you forgot.

2. You need to know what the graphs of absolute value equations and inequalities looks like as well as the graphs of different types of functions (or be able to figure out what they look like). Do you remember the types of conic sections? You need to know what arithmetic and geometric sequences are. Can you multiply matrices?
3. Relax when you take your exam. If things are worded a little differently than you are used to, don't flip out! Use your brain and use what you know to answer the question. You know this stuff. You can do it! (And I will give a little leeway in grading since you were not "taught to the test" as other students would have been.)

Day 180

1. Take your [final](#).
2. Record your score out of 45. (potential for extra credit)

[Donate/Say Thanks](#)

Notes:

I'm not sure this course covers enough trigonometry for the [College Algebra CLEP](#) test. Trigonometry and Pre-Calculus is the next course in the math progression. Here's a [CLEP College Mathematics](#) practice test.