

FINANCIAL ALGEBRA 2E:

“A field trip from cover to cover”

USING THE “REALITY CHECK” PROJECTS: TEMPLATE OPTIONS

General Teaching Tips and Information About the “Reality Check” Projects

- Each of the eleven end-of-chapter assessments includes a feature called “Reality Check.” These are projects that the students do outside of classroom instructional time.
- They can be assigned however the teacher sees fit. Students can be required to complete one or two per chapter. Optional projects can be offered for extra credit.
- The projects are long-term assignments, since they involve research, visual presentations, and/or field work. Students can be given a few weeks to complete them. Therefore, they should be addressed in advance, usually at the beginning of each chapter. In some cases, the students can start their projects immediately, without waiting for the chapter to be completed. In other cases, they need to learn certain material before undertaking the projects. By assigning them in advance, students who need to wait to start the projects can at least allocate the time they will need to complete the projects.
- Many of the projects require students to get out into the community—they are pricing a car, a funeral, comparing loans at different banks, etc. For each person they visit they need to get a business card.
- When the project is handed in, a thank-you letter in an unsealed, stamped envelope must be turned in as well. You can check the letter before mailing it, and have the student revise it if necessary. Many students do not even know the correct form for writing a letter! The letters are more personal than an e-mail or a text message, which often go unnoticed since most business people get dozens, if not hundreds, per day. They help maintain good relations with the community. This will foster a positive school-community relationship which will be an advantage to students doing projects in the future. We are also teaching them manners and common courtesy.
- Some of the projects require students to make a PowerPoint or tri-fold presentation. Teach the students how to prepare quality, academic-looking visual presentations. Make sure they are spending time on substance, rather than style and glitz. The excessive use of random color, designs, busy backdrops, clip art, etc., often detracts from the intended delivery of the message, and students should learn to keep their presentations professional-looking. Students have shown tremendous discretion when this is pointed out to them. It’s also more challenging to be creative with art and pictures than just arbitrary.

- There is tremendous flexibility in every aspect of the projects. You can “guide” students through some of the projects by giving out template sheets which they can fill in as part of the project. Some of those sheets are included here. You can teach students to organize their thoughts by having them do the projects without any of the guide sheets, or you can use a combination of the two methods.

Understanding Project-Based Instruction

The Reality Check projects are a form of alternative assessment with features, benefits, and caveats that make them unique and different from the more mainstream summative, formative, and diagnostic assessments that are usually more prevalent in mathematics classes.

- It often addresses real-world opportunities.
- It is framed by a meaningful question that needs to be addressed.
- It allows students to engage in an extended process of asking more probing questions in stages, as they find out answers to previously asked questions.
- It is typically interdisciplinary, combining mathematics with in the Financial Algebra case, real-world finance situations.
- It usually involves communication skills. In Financial Algebra, students must communicate with community business people, and communicate with their classmates when they present their projects.
- It is often multi-faceted, involving reading, writing, researching and presentation skills.
- It builds social skills, since students must speak, make eye-contact, and send than-you letters.
- It is engaging. Real-world topics are often more engaging, and students having a choice allows them to pick a project of particular interest to them.
- Students should be shown examples of student projects from past years to get acclimated. The teacher should show well-done projects to raise the bar year to year.
- Projects conform well to the Common Core Standards for Mathematical Practice MP1 – MP8.
- It is for students of all ability levels.

- Educational research has shown it has a positive effect on achievement and attitude.
- Projects require students to manage their own time like they will have to as independent adults, since they are long-term.
- Students get to make decisions about the finished product and how they would like to present it.
- Projects helps students organize themselves.
- Projects can be created or customized to optimize a particularly struggling student's success. You can capitalize on a student's interests.
- Projects allow student to use their ingenuity and take pride in their work. The project will develop based on the motivation, drive and skill of the student.
- Projects are not "timed" like class tests.
- Projects lend themselves well to a "Parent Finance Night" at school where students can present to parents in a gym setting, with each student having an exhibit space.

All projects have the same general progression.

LAUNCH—establish the purpose of the project, a due date, and a mode of presentation.

RUBRIC FAMILIARITY—Students need to know what is expected.

RESEARCH AND FIELD WORK—In this phase, students secure information.

WRITE-UP—Students summarize their work in written form. It could be a report, script, slide show narrative, etc.

REVISION—Proofreading (grammar-specific_ and editing (content-specific) revisions are made.

PRESENTATION—Students can use PowerPoint, a tri-fold board, make an iMovie, create a poster, write a report, or use any combination of these techniques.

Some Ideas You Can Use to Create a Project Rubric

You can use these criteria and assign 1-10 in each, add the points and create a percent. Having many criteria lets the student know where they can improve and what they did well, and is much better than a global letter grade. Students can get a grade for the written report and an oral presentation.

Remember that the “report” can be written in several modes: It could be a traditional written paper, PowerPoint slides, a script for the narration of a slide show or iMovie video, or a poster.

PROJECT REPORT GRADING SHEET: 1 – 10 in each category

1. ____ The written report is clear, succinct, and comprehensive. Pages are numbered.
2. ____ All finance terms are explained, with examples.
3. ____ The report does a clear job of explaining the topic.
4. ____ Mathematical notation and terminology are used correctly.
5. ____ Captions for figures are numbered, descriptive, and formatted correctly.
6. ____ Tables are numbered, with descriptive titles, and formatted correctly.
7. ____ Any uploaded diagrams are given a citation in the bibliography and in the caption.
8. ____ Graphs and/or pictures are used to illustrate key points. Figures are numbered.
9. ____ The physical layout of the report--text, diagrams, tables—is high quality.
10. ____ Appropriate and sufficient examples are given.
11. ____ Recommendations for further study flow naturally and are well-thought out.
12. ____ All edits and recommended changes are incorporated into the paper.
13. ____ The report reflects an appropriate amount of work for the allotted time.
14. ____ The depth and quality of the paper are commensurate with the student’s ability.

ORAL PRESENTATION GRADING SHEET: 1 – 10 in each category

- 1.____ Posters and slides have large enough print and bold enough lines.
- 2.____ Posters and slides use color where appropriate, to help convey mathematical thoughts.
- 3.____ Posters and slides have titles.
- 4.____ Difficult-to-remember last lines of slides are repeated on subsequent slides..
- 6.____ Script and sentence construction is sophisticated, polished, and appropriate .
- 7.____ Crucial tables and diagrams are always in view when needed.
- 8.____ Powerpoint slides have animation where appropriate.

PREPARATION

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- 9.____ The introduction is appropriate for the novice. Aim is clearly stated.
 - 10.____ There is no dependence on the reading of slides to recall information.
 - 11.____ Inflection is used as “verbal italics.”
 - 12.____ Voice projection is used as “verbal italics.”
 - 13.____ Vocal work transcends “tell” to “sell.”
 - 14.____ The pointer is used in a “touch and still” format.
 - 15.____ The pace is appropriate.
 - 16.____ Eye contact is frequently made.
 17. ____ There is well-organized board work and/or “live” written work on slides or posters.
 - 18.____ Physical transitions from topic to topic are smooth. Appropriate segues are used.
 - 19.____ Pausing is used frequently, appropriately, and effectively. Time is allocated wisely.

DELIVERY

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- 20.____ Every single slide and poster was seen and critiqued before the presentation.
 - 21.____ Outside resource materials were used where appropriate or suggested.
 - 22.____ Preparation of all materials was done timely, in advance.
 - 23.____ The oral preparation and presentation had punctual, appropriate effort.
 - 24.____ Preparation included a series of rehearsal/critiques/revisions done sufficiently in advance.

EFFORT

OPTIONAL TEMPLATES FOR SELECTED PROJECTS

Chapter 2 Reality Check: Banking Services (Page 140, #5)

For this project you will be visiting two local banks to compare their fees and services. Be sure to get a business card from each representative you speak to.

Name of Bank A _____

Address of Bank A _____

Name of Bank B _____

Address of Bank B _____

1. Read Reality Check project #5 on page 140.
2. Speak to a bank representative about the different accounts and banking services they offer, and fees or minimum balance requirement associated with each service.
3. Use the headings of the following table to compile your information.

BANKING SERVICE or TYPE OF ACCOUNT	BANK A		BANK B	
	Fee	Minimum Balance	Fee	Minimum Balance

4. Compile your information and discuss your findings in a tri-fold presentation that includes brochures from each of the banks.

Attach business card here

Attach business card here

Chapter 4 Reality Check: Price a New Car (Page 283, #1)

Name and address of dealership:

List the options and standard equipment for your car. If there is a separate charge for the item, list it. If it is included in the price, write 'included.'

Make, model and year of car:

Price of car \$ _____

Sales tax \$ _____

Total cost \$ _____

Down payment \$ _____

Amount to finance \$ _____

Attach business card here

OPTION	COST

Chapter 4 Reality Check: Pricing Auto Insurance (Page 283, #2)

For this project, you are going to price insurance for the car you picked out in Reality Check project #1. In the following table, include the premium for each type of insurance you select. Fill in any optional insurance on the last lines of the table.

TYPE OF INSURANCE (give limits of coverage* or deductible**)	ANNUAL PREMIUM	SEMI-ANNUAL PREMIUM	MONTHLY COST
Bodily Injury Liability*			
Personal Injury Protection (No-fault)*			
Property Damage Liability*			
Uninsured/Underinsured Motorist Protection*			
Comprehensive**			
Collision**			
Emergency Road Service			

Find the monthly cost of doubling your coverage for Personal Injury Protection. _____

Find the annual savings if you double your deductibles for comprehensive and collision. _____

List the discounts your insurance agent offers, such as driver training, defensive driving course completion, accident-free savings, multi-car discount, or good student discount.

_____, _____,
 _____, _____,
 _____, _____.

Attach business card here

Chapters 3 and 4 Reality Check: Comparing Car Loans

This project combines the loan project from Chapter 4 (page 202, #2) with the auto theme from chapter 4. After students price the car and insurance for the car, they can comparison shop loans for the car at two different lending institutions in their area.

Name and address of Lending Institution 1:

Type of lending institution. _____

Name and address of Lending Institution 2:

Type of lending institution. _____

	LENDING INSTITUTION 1	LENDING INSTITUTION 2
Amount financed		
APR		
Length of loan		
Monthly payment		
Total of all monthly payments		
Finance charge		

Attach business card here

Attach business card here

Chapter 11 Reality Check: Store-Brand Savings (Page 712, #8)

For this project you are going to go to one supermarket that offers nationally-advertised brands and store-brand items. You are going to pick 30 items your household normally uses. These must be packaged items that are offered as store brands and nationally-advertised brands in the exact same size. Do not use meat or produce.

Name and address of store. _____

1. List the 30 items in a table with the column headings shown, and give the price for each in your table.

ITEM DESCRIPTION WITH SIZE (WEIGHT OR VOLUME)	NATIONALLY- ADVERTISED BRAND	NATIONALLY- ADVERTISED BRAND'S COST	STORE- BRAND COST
TOTAL WEEKLY COST OF ALL 30 ITEMS			

2. Assume these 30 items are purchased weekly. Find the annual savings if the store brand is purchased as opposed to the nationally-advertised brand every week. _____

3. Pick one of the items that you would like to taste test. Purchase the store brand and the nationally-advertised brand. Conduct a blind taste test on friends or members of your family. Report the findings.

Chapter 11 Reality Check: Comparison Grocery Shopping (Page 712, #9)

For this project you are going to go to two supermarkets that offer nationally-advertised brands. You are going to pick 30 items your household normally uses. These must be packaged items that are offered as nationally-advertised brands. Do not use meat or produce.

Name and address of Store A. _____

Name and address of Store B. _____

Bring a clipboard. When you go to the first store, price 40 items, just in case some of the items are not available at the second store!

1. List the 30 items in a table with the column headings shown, and give the price for each in your table.

ITEM DESCRIPTION WITH SIZE AND BRAND NAME	COST IN STORE A	COST IN STORE B
TOTAL WEEKLY COST OF ALL 30 ITEMS		

Assume these 30 items are purchased weekly. Find the annual savings if the store with the lowest total weekly cost is compared to the other store. _____

What are the percent savings when the less expensive store is compared to the more expensive store? Round to the nearest percent. _____

Would the **annual** dollar savings from using the less expensive store pay for a **week's** worth of the 30 items you picked? _____

Chapter 7 Reality Check: Home Inventory (Page 457, #19)

For this project, you are going to create a scrapbook or electronic file of valuable items in your home. This will be of tremendous value if you ever need to make an insurance claim due to fire, theft, or other casualty.

Remember that everything in a household is valuable. Electronic equipment, musical instruments, jewelry, cameras and sporting equipment are traditionally thought of as valuables. You may not typically think of pots and pans and clothing as valuables, but they are for insurance purposes.

1. Read the description of Reality Check project #19 on page 457.
2. Discuss the project with your parent or guardian.
3. Take the appropriate photos.
4. Scan or copy the appropriate receipts.
5. Put the book or file together.
6. Fill in a table with the following headings. Make the table as long as it has to be by adding as many lines as you need. The table will serve as the first page of your project.

COMPLETE ITEM DESCRIPTION WITH SIZE, BRAND NAME, CONDITION	MARKET VALUE
TOTAL VALUE	

7. When completed, your project should be stored safely, so it is available even if there is a casualty involving fire, flood damage, or theft.
8. Have your parent or guardian discuss the project with your insurance agent to make sure you have appropriate coverage for the items.
9. Each time you purchase a new item, add it to the project to keep it current.
10. If any items are collectible and appreciate in value, consider having them appraised so their true worth can be correctly determined.

Chapter 8 Reality Check: Charting a Stock (Page 524, #1)

For this project you will be choosing a corporation to follow for three weeks. You should choose a corporation in an industry in which you have specific interest.

Corporation name _____

Address of corporate headquarters _____

Website address _____

1. Read Reality Check project #1 on page 524.
2. Find out the corporation's website address.
3. Visit the website and prepare a report on any major news found on the website.
4. Follow the stock activity of the corporation each trading day for the next three weeks. Use the table headings below to create your table.

DATE	VOLUME (in thousands)	OPEN	HIGH	LOW	CLOSE	NET CHANGE

5. Prepare a graph using the techniques shown in section 8-3.
6. Prepare a graph of the five-day moving averages as shown in section 8-4.
7. Compile your website report and your graph into a presentation.

Chapter 3 Reality Check: Lending Institutions (Page 202, #2)

For this project you will be visiting two lending institutions to compare their rates for loans. Be sure to get a business card from each representative you speak to.

Name of lending institution A _____

Type of lending institution _____

Address of lending institution A _____

Name of lending institution B _____

Type of lending institution _____

Address of lending institution B _____

1. Read Reality Check project #2 on page 202.
2. Use the following table to organize the information required for the project.

	LENDING INSTITUTION 1	LENDING INSTITUTION 2
Amount financed		
APR		
Length of loan		
Monthly payment		
Total of all monthly payments		
Finance charge		

Attach business card here

Attach business card here

Chapter 5 Reality Check: Incredible Rates of Pay

(Page 326, #10)

For this project you will be using the Internet and/or a library to research earnings of famous, high-profile people. You are going to compute the amount of money they earned in a specific year, and break it down several ways according to their profession. For example, you could compute a baseball player's salary per inning, per game, per pitch, per week, etc. In some cases, salaries may be annual. In other cases, they may be similar to piecework. For example, a movie star could receive a flat salary for an entire movie, which could take months to complete. A rock star's earnings could be from many sources—radio play, CD royalties, concert, etc.

Pick ten people and find out their earnings for a specific year. Then pick a unit that makes sense for that person's industry, and compute their salary per unit. The headings in the following table may help you.

Person	Occupation or Field	Year	Earnings	Units	Number of Units In That Year	Earnings per Unit

Visit your town's website and see if you can find the salary of a mayor, firefighter, teacher, policeman, etc. Compare their salaries to the salaries you researched for the celebrities.

Prepare a report on your findings.

Chapter 5 Reality Check: Salaries (Page 326, #6)

For this project you will be using the Internet and/or a newspaper to research earnings in certain professions.

1. Read the Reality Check project #5 on page 322.
2. Find 20 classified for jobs in a specific profession.
3. Translate each ad into full sentences.
4. Use the headings of the following table to report information on the salaries.

OCCUPATION/JOB DESCRIPTION	SALARY AS LISTED IN CLASSIFIED AD	ANNUAL GROSS SALARY	MONTHLY GROSS SALARY	WEEKLY GROSS SALARY

5. Find the classified ad rates for the publications in which you found your ads.

SOURCE	CLASSIFIED AD PRICE STRUCTURE

Chapter 7 Reality Check: Mortgage Interest (Page 456, #3)

For this project you will be computing the interest on a mortgage.

1. You need to find a mortgage calculator on the Internet. There are many available.
2. Use the Internet or a newspaper to find a typical average interest rate for a mortgage.
3. Use the classified ads to find the costs of different types of homes in your area.
Find the cost of a low-end home, a high-end home, and an average home.
4. Assume there is a \$50,000 down payment for each home. Use the table headings below to organize information about mortgages on these homes.

TYPE OF HOME	AMOUNT FINANCED	MONTHLY PAYMENT FOR 15-YEAR LOAN	TOTAL PAYMENTS FOR 15-YEAR LOAN	INTEREST FOR 15-YEAR LOAN

TYPE OF HOME	AMOUNT FINANCED	MONTHLY PAYMENT FOR 30-YEAR LOAN	TOTAL PAYMENTS FOR 30-YEAR LOAN	INTEREST FOR 30-YEAR LOAN

5. Compare the interest for the 15- and 30-year loans. Compare the monthly payments. Comment on your findings.

Chapter 10 Reality Check: Funeral Expenses (Page 651, #3)

1. Read the Reality Check project #3 on page 651.
2. Visit a local funeral parlor and discuss with a representative the cost of a funeral.
Include a business card.

Name of funeral parlor _____

Address _____

3. Organize your information into a table in which you describe the different services and what they cost.

SERVICE AND DESCRIPTION	COST

4. Comment on the advantages of discussing these options and expenses with your loved ones in advance.

Attach business card here

Chapter 6 Reality Check: Itemized Deductions (Page 385, #2)

1. Read the Reality Check project #2 on page 385.
2. Go on to the Internal Revenue Service website (www.irs.gov) and download a copy of Form 1040-Schedule A from this website.
3. On the IRS website, search for **Publication 17: Your Federal Income Tax**. This publication is too lengthy to download and print, so use it online.
4. Look for the itemized deductions and Schedule A section of Publication 17. You are going to pick some examples from each type of deduction on Schedule A.
5. Read through the examples and lists to see what expenses are deductible and which ones are not. Find 20 examples to include in your report. Summarize your findings in a table like the one below.

SCHEDULE A CATEGORY	EXAMPLE OF EXPENSE	IS IT TAX-DEDUCTIBLE?

6. Comment on one of the example you found that you disagree with, and explain why you disagree.

Chapter 11 Reality Check: Price Your Wedding (Page 713, #10)

For this project, you are going to list all of the items you need to plan your own custom wedding, and find out the cost of each.

- You will be visiting a photographer, catering hall, florist, music agency, limousine service, etc. Get the name and address of each place you visit. Include a business card from each person you speak to.
- Decide on the number of people you will be inviting. _____
- Consult with a representative at each place you visit, and decide on exactly what you want, so you can get a cost for each expense.
- Compile your information into a table such as the one shown below.

SERVICE	PROVIDER	TOTAL COST

What is the total coast of this wedding? _____

Attach business card here

Attach business card here