

Case Study Objectives

- List age appropriate savings goals and strategies.
- Create a budget based on a planned savings goal.
- Evaluate the decisions made while working towards a financial goal.

For Jump\$tart & Math Common Core Standards Alignment click [here](#).

Materials

- Class set of [Budgeting to Buy Big case study](#) and [Mia's Concert Challenge](#)
- Optional: Calculator for calculations
- Optional: [Calculation Hints](#) page

Key Terms

- Budget
- Income
- Expenses
- Opportunity Cost

CASE STUDY (40 MIN)

- **Situation/Case Study:** (10 min) Activate student knowledge by asking, “*What are some savings goals (expensive purchases that require savings) you have?*” (i.e. clothing, shoes, phone, bike, car, trip, college). Ask students, “*Is it easier to save money or spend money? Why?*” (answers may differ depending on personal and family values towards spending/saving and personality types) Tell students that today they will help set a savings goal and make a plan to get there. Then, have students read aloud, or read individually, the [Budgeting to Buy Big Case Study](#).
- **Questions:** (15 min) Have students finish reading the [Budgeting to Buy Big Case Study](#) and answer the case study questions. As time permits, begin the challenge task.
- **Challenge:** (10 min) Use [Mia's Concert Challenge](#) page so students can perform the calculations required and then “text” Mia. Students should be prepared to share which advice they gave Mia and why, along with their calculations. (To scaffold, see the [Calculation Cheat Sheet](#).)
- **Reflection:** (5 min) Ask students, “*What are some of the advantages and disadvantages of saving for a financial goal? Do you think it was worth it for Mia to go to the concert?*”

Assessment

- Evaluate accuracy and completeness of student answers to the questions and challenge using the [Teacher Answer Key](#)

Extensions/Connections

- Create a money diary, to start keeping track of your money. Show this diary to your family and ask their advice on how you can save more!
- More on [saving strategies](#)!
- Share the [Family Conversation Guide](#) for this lesson

Budgeting to Buy Big

Mia just got a job where she earns \$10 an hour and works 7 hours a week. She wants to start saving for a new laptop for high school. She already has an emergency fund of \$100 that she will NOT use, no matter what. The laptop she wants costs \$502.99. She knows the first trick to saving is to write a budget. A budget is a plan for how to manage your money. She wrote down all of the things she currently spends money on (expenses) and how much money she expects to get from her job plus her allowance (income). She is ready to start saving for her computer. She does some research online and finds the following saving strategies:

Savings Plans:

- 1) Put all extra change/coins into a jar and then each month put the coins into your savings account. If you have a debit card later on, there is an app for this strategy
- 2) Write down all of your expenses and then save whatever you have left over at the end of each week/month.
- 3) Pay Yourself First: Save your money right away and then spend what is leftover.
- 4) Increase your income. Ask your family, neighbors or friends if you can help them with chores or tasks for extra money.

MIA'S BUDGET:

Income	Monthly Income	Expenses	Monthly Costs
Job \$10 per hour, 7 hours per week	\$280	Coffee (\$2.65 five times a week)	\$53.40
		Donation to charity (\$8 a month)	\$8.00
		Spotify Premium (\$9.99 a month)	\$10.00
		School Breakfast (\$1.53 per day)	\$30.60
Allowance	\$60	School Lunch (\$2.68 per day)	\$53.60
		Weekend Activities	\$170.00
Total Income	_____	Total Expenses	_____

QUESTIONS:

1. Look at Mia's Budget to the left. How much is her total monthly income and how much are her total monthly expenses?
2. Mia has a goal of saving 10% of her income each month. With her current income and expenses, can she save 10% of her income each month? If not, how much more money does she need to earn or cut from her expenses each month to meet this goal?
3. Give her advice on what to cut from her expenses, or how to add income.
4. If Mia does save 10% every month, using your advice, how many months will it take her to save up for the computer?

CHALLENGE:

Mia is faced with a choice. Her friend invites her to a concert featuring her favorite artist. Mia would have to use the money in her savings account to buy the concert ticket if she decides to go.

Mia has to compare the **opportunity cost** of going to the concert or not. An opportunity cost is the benefit you give up in order to buy something else.

Read more about Mia's concert opportunity and help Mia make an important decision on the **Mia's Concert Challenge** page.

Challenge: Budgeting to Buy Big

Mia's Concert Challenge

Concert Opportunity Cost: Six months after Mia started saving 10% of her income each month, Mia's friend invites her to a concert featuring her favorite artist. The tickets cost \$180. Mia would have to use the money in her savings account to buy the concert ticket if she decides to go.

Discuss: What would Mia be giving up if she decides to go to the concert? What would Mia be giving up if she decided not to spend the money?

Calculate:

1. First, remember that Mia's **monthly income** is equal to her monthly pay from her job plus her monthly allowance. Also, remember her **big savings goal**, the total cost of her computer from page 1.
2. Next, calculate Mia's **current total savings** if she has set aside 10% of that **monthly income** for six months.
3. Out of that **current total savings** amount, Mia has to decide whether to go to the concert or not. Make both calculations to help her come to the right decision:

Buy the concert ticket:

4a. Subtract the ticket cost from Mia's **current total savings** to find her **leftover savings**.

4b. Calculate the difference between Mia's **leftover savings** and her **big savings goal**.

4c. Use that difference to calculate how many more months Mia will have to save 10% of her monthly income to get to that **big savings goal**:

_____ months to **big savings goal** of buying a laptop if Mia goes to the concert.

Don't buy the concert ticket:

4a. Keep Mia's full **current total savings** amount you calculated in #2.

4b. Calculate the difference between Mia's **current total savings** and her **big savings goal**.

4c. Use that difference to calculate how many more months Mia will have to save 10% of monthly income to get to that **big savings goal**:

_____ months to **big savings goal** of buying a laptop if Mia does NOT go to the concert.

4. Based on your calculations, do you think Mia should go to the concert or not? Write Mia a text to explain your decision. Remember: this is Mia's *favorite* artist! Be ready to share.

BONUS: Let's say that instead of going to the concert, Mia decides to work a few extra hours, earning \$50 extra this month. How does that affect her **big savings goal**?

Hints: Budgeting to Buy Big

Calculation Hints

CALCULATIONS NEEDED FOR QUESTION 3:

Total Income & Expenses: Add all the values in the income column. Add all the values in the expenses column.

Calculate Savings Goal per month: Total Income x percentage saved
 $(280 + 60) \times 0.10 =$

Calculate the number of months: Cost of the computer \div savings per month
 $502.99 \div 34$

CALCULATIONS NEEDED FOR QUESTION 4:

Compare current saving potential: Total Income - Total expenses (compared to) Monthly savings goal
 $340 - 316$ $< > \text{ or } =$ 34

If she has less than \$34 she must make cuts in her expenses to be able to save more money

If she has equal to \$34 then her current expenses are fine.

If she has more than \$34 then you should suggest that she saves more than 10% each month.

CALCULATIONS NEEDED MIA's CONCERT CHALLENGE:

How much Mia has after 6 months of savings: Savings per month x 6 months
 34×6

If you decide she should go to the concert Total Saved - Cost of Tickets \div Savings per month
 $(204 - 180) \div 34$

If you decide she should NOT go to the concert Total Saved + \$50 \div Savings per month
 $(204 + 50) \div 34$

Answer Key: Budgeting to Buy Big

Budgeting to Buy Big Case Study Questions

Note: There may be slight variations in student answers - use your judgment as to the level of comprehension students demonstrate with their answers.

1. Look at Mia's Budget to the left. How much is her total monthly income and how much are her total monthly expenses?
Her total monthly income is \$340 and her total monthly expenses are \$315.
2. Mia has a goal of saving 10% of her income each month. With her current income and expenses, can she save 10% of her income each month? If not, how much more money does she need to earn or cut from her expenses each month to meet this goal?
10% of 340 is 34. $340 - 316 = 24$. No Mia can only save \$24. She needs to cut \$10 from her expenses or earn \$10 more a month.
3. Give her advice on what to cut from her expenses, or how to add income.
Answers will vary. Potentially discuss this question by having students share who told her to cut versus earn. Have students explain why and land on the concept that different people have different attitudes towards opportunity costs depending on their life circumstances and experiences.
4. If Mia does save 10% every month, using your advice, how many months will it take her to save up for the computer?
It will take Mia 15 months.

Budgeting to Buy Big Case Study Challenge

Discuss: What would Mia be giving up if she decides to go to the concert? What would Mia be giving up if she decided not to spend the money?

Mia would be giving up getting her computer sooner if she decides to go to the concert. Mia would be giving up a fun experience with her friend and seeing her favorite musical artist if she decided to not spend the money.

Calculate:

1. Monthly income: \$340, big savings goal: \$502.99
2. Current total savings: \$204
3. Out of that current total savings amount, Mia has to decide whether to go to the concert or not. Make both calculations to help her come to the right decision:

Buy the concert ticket: $(204 - 180) \div 34 = 15$ months to big savings goal of buying a laptop if Mia goes to the concert.

Don't buy the concert ticket: $(204 + 50) \div 34 = 7$ months to big savings goal of buying a laptop if Mia does NOT go to the concert.

4. Based on your calculations, do you think Mia should go to the concert or not? Write Mia a text and explain your decision and why. Remember: this is Mia's favorite artist!
Answers will vary: Have students share and come to the understanding that different people have different attitudes towards saving and spending money depending on their life circumstances and experiences.