

## Math Enrichment Activity - BPRVTHS

Hello Everyone,

Your math teachers have found an activity for you to work on during our time away from school. There are two pdf files: “Analyzing budgets” worksheet and “Budget scenarios” handout. You will need to access both to successfully complete your activity.

You will also need to know the following vocabulary terms and rules:

- **Budget:** A plan that outlines what money you expect to earn or receive (your income) and how you will save it or spend it(your expenses) for a given period of time. This is also called *a spending plan*.
- **Net Income:** The amount of money you bring home in your paycheck after taxes and other deductions are taken out. This is also called *take-home pay*.
- **The 50-30-20 Rule:** This rule helps you figure out how to budget your money. 50 percent for things you need, 30 percent for things you want and 20 percent for financial goals.

<b><u>Percent of Net Income</u></b>	<b><u>Budget Category</u></b>	<b><u>Examples of Items</u></b>
50 percent	Needs	Rent or mortgage payments, groceries, utilities, transportation
30 percent	Wants	Dining out, vacations, entertainment
20 percent	Financial Goals	Emergency savings, pay down debt, save for education plans, save for retirement

If you need help with the assignment, please email us. We are here for you!

Stay well. We look forward to seeing all of you again!

Your Bay Path Math Teachers. 😊

**BUILDING BLOCKS STUDENT WORKSHEET**

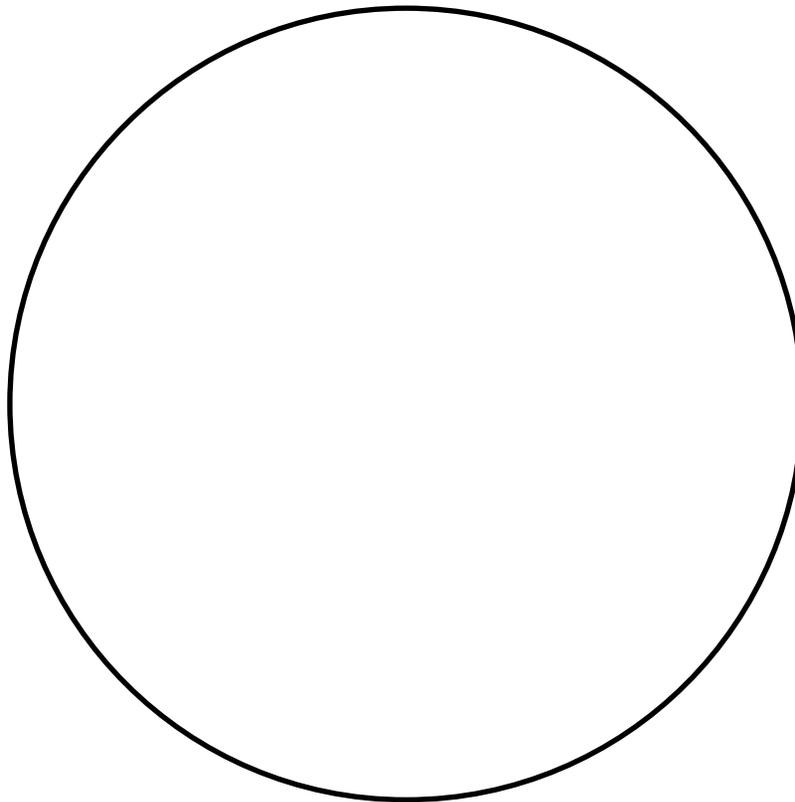
# Analyzing budgets

One rule to live by when making a budget is to look at your monthly net income and plan to use 50 percent of it on needs, 30 percent on wants, and 20 percent on saving for financial goals.

## Instructions

1. Use the circle below to create a pie chart that shows the 50-30-20 rule of budgeting.
2. Review a scenario on the "Budget scenarios" handout and write the expenses in the appropriate categories on the next page.
3. Determine whether the monthly budget meets the 50-30-20 rule.
4. Write advice to help bring the scenario's budget closer to the 50-30-20 rule.

## Create a rule of budgeting pie chart



## Categorize expenses into the 50-30-20 rule of budgeting

- As you read through a scenario on the “Budget scenarios” handout, list all expenses for each category in the appropriate cell below.
- Add them to get spending totals for each category.
- Divide the category total by the monthly net income to determine percentage.
- Analyze whether current budgets are near, above, or below recommended percentages.

Monthly net income: \_\_\_\_\_

	Needs (50 percent)	Wants (30 percent)	Financial goals (20 percent)
List all expenses in this category (include cost for each)			
Category total			
Percent of net income			
Compare to 50-30-20 rule			

## Justify your categorization

Explain your thinking as to why you categorized expenses the way you did.

## Analyze the budget

Describe how this budget compares to the suggested 50-30-20 rule of budgeting.

## Advice for improving the budget

What advice would you give to the individual(s) in this scenario to improve their budget based on the 50-30-20 rule?

# Budget scenarios

A budget is a spending plan that outlines what money you expect to earn or receive (your income) and how you will save it or spend it (your expenses) for a given period of time.

A key term to understand in creating a budget is net income, which is the amount of money you bring home in your paycheck after taxes and other deductions are taken out; this is also called take-home pay.

The following scenarios describe three different personal budgets.

## Scenario 1: Recent college graduate

Sara recently graduated with a degree in marketing. She started a job that pays her \$48,000 per year. Her monthly net income is \$2,800. She's moving into her own one-bedroom apartment in the city. She doesn't own a car, but she has subway expenses. She also adopted a dog, so she now has to pay for dog food and vet bills. Sara has budgeted for the following monthly expenses:

Expense type	Expense cost	Expense type	Expense cost
Rent	\$960	Utilities	\$80
Food	\$400	Cell phone	\$100
Clothing	\$150	Savings	\$100
College loan	\$140	Renter's insurance	\$80
Eating out/entertainment	\$200	Pet care	\$60
Subway	\$220	Cable/Internet	\$160

## Scenario 2: Planning for family goals

Derek and his wife Diana have two children under 4 years of age. Derek works as a school security officer and earns \$20/hour, or \$41,600 per year. Diana is an assistant manager for a hotel and earns a yearly salary of \$46,200. Their net income is \$5,121 per month. Their cars are a little older, but they are both paid off.

So their primary travel expenses are gas, tolls, and general car maintenance. Cable TV is important to them because Derek loves watching football games, and, since their children are young, they don't go out much. They've talked about opening 529 college savings plans for both children, but they seem to forget each month. They would also like to make improvements to their house and are thinking about getting a home equity loan to meet this goal. Derek and Diana have budgeted for the following monthly expenses:

Expense type	Expense cost	Expense type	Expense cost
Mortgage	\$1,240	Child care	\$1,200
Food	\$1,300	Cable/Internet	\$170
Utilities	\$110	Cell phones	\$160
Transportation	\$140	Credit card payments	\$400
Insurance (home, cars)	\$240	Eating out/entertainment	\$300

### Scenario 3: Young working woman

Kenza was born and raised in a small town. She loves animals and got a full-time job as a vet tech after she graduated from high school. The vet gave her on-the-job training. Kenza wants to leave home and get an apartment with a friend. She realizes having a roommate to share the costs of living will help keep her expenses low. Kenza earns \$11.77 an hour and works 40 hours per week. Her annual income will be just under \$25,000. Kenza's monthly net income is \$1,458. There is a bus that runs between her job and the apartment she wants to rent. She and her friend go out every weekend and have fun. Kenza has budgeted for the following monthly expenses:

Expense type	Expense cost	Expense type	Expense cost
Rent	\$375	Renter's insurance	\$33
Groceries	\$175	Cell phone	\$55
Utilities	\$45	Savings	\$25
Bus passes	\$40	Cable/Internet	\$40
Clothing	\$200	Eating out/entertainment	\$350