

MAP 4CI : Creating Budgets

When living on your own you need to work on how to manage your expenses as they relate to your income. A budget is an organized income and spending plan.

A good budget has 2 main sections:

1. Income
2. Expenses

A budget is balanced if the money coming in equals the money going out (which includes money going to savings and investing). To keep the budget balanced, an increase in some expenses must be countered by a decrease in other expenses, or an increase in income, or both.

1. Income

Gross Income - your total income before deductions for income taxes, pension plans, employment insurance etc.

Net Income - the amount of income after deductions (commonly referred to as your take-home pay).

2. Expenses

Fixed Expenses - expenses that do not change from month to month.

Examples include : mortgage, car payment, loan repayments etc.

Rent, car insurance,

Variable Expenses - expenses that change from month to month and may not follow a regular schedule. These expenses are harder to estimate.

Examples include: food, entertainment, clothing, gifts, utilities, etc.

Saving is an important part of being financially responsible.

Example 1: Jackson works part-time and earns approximately \$450 every two weeks. He would like to buy a \$6000 motorcycle as soon as possible. Jackson lives at home and gives his mother \$50 per week to help with expenses.

- a) How much is Jackson able to save from each paycheque? What is the earliest time that he can purchase the motorcycle?

$$\$450 - \$50(2) = \$350$$

Therefore, Jackson can save \$350 per pay.

- b) Design a savings plan for Jackson so that he can buy his motorcycle in one year.

$$\$6000 / \$350 = 17.142$$

Therefore, it will take 18 pays to save the required cash.

- c) If Jackson deposits his savings in an account that pays 4% per year, compounded daily, will he be able to buy the motorcycle sooner?

Use the TVM calculator on the site: <http://www.fncalculator.com/> or the EZ Calculators app on your i-device if you have one...(blue icon with calculator and coins in front of it)

Determine if the interest earned will reduce the number of paycheques required.

TVM Advanced Calculator	
Mode <input checked="" type="radio"/> End <input type="radio"/> Beginning	Mode <input checked="" type="radio"/> End <input type="radio"/> Beginning
Present Value <input type="text"/> PV	Present Value <input type="text"/> PV
Payment <input type="text"/> PMT	Payment 350 PMT
Future Value <input type="text"/> FV	Future Value -6,000 FV
Annual Rate (%) <input type="text"/> Annually <input type="button" value="Rate"/>	Annual Rate (%) 4 Annually <input type="button" value="Rate"/>
Periods <input type="text"/> Monthly <input type="button" value="Periods"/>	Periods 16.93 Bi-Weekly <input type="button" value="Periods"/>
Compounding <input type="button" value="Monthly"/>	Compounding <input type="button" value="Daily"/>

Therefore, Jackson would need to save for 17 pays, reducing his saving time by one pay.

MAP 4CI : Budget Worksheet Example : Paul

Paul is studying to be an electrician. During the summer he worked full time to pay for his books, tuition, and supplies. However, he doesn't think he has saved enough for his living expenses during the school year.

He receives a \$3500 scholarship each school year

He also earns \$500 bi-weekly at a part time job during school.

He has \$74 in payroll deductions on each pay cheque.

He estimates his other expenses to be: rent and utilities at \$400/month, transportation \$80/month, food \$75/week, entertainment \$25/week, clothing \$110/month, miscellaneous costs \$100 bi-weekly.

Design a monthly budget for Paul. Is he earning enough to cover his expenses, if not how can he balance his budget?

Paul's Monthly Budget

Income		
	Scholarship \$3500/12	291.67
	Pay (\$500-74)(26)/12	923.00
	Total Income :	1214.67

Monthly Expenses		
Fixed		
	Rent/Utilities	400.00
	Transportation	80.00
	Total Fixed Expenses:	480.00
Variable		
	Food (\$75)(52)/12	325.00
	Entertainment (\$25)(52)/12	108.33
	Clothing	110.00
	Miscellaneous (\$100)(26)/12	216.67
	Total Variable Expenses:	760.00
	Total Expenses:	1240.00

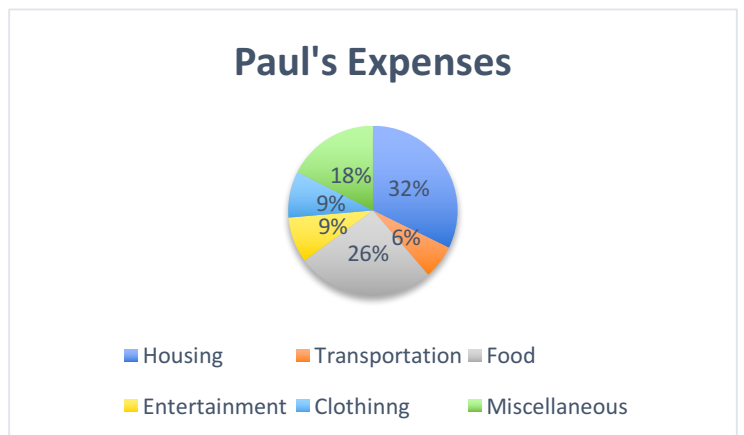
Balance : -25.33

Use a Pie Chart to display the percent of monthly expenses, using the following steps:

1. Identify a minimum of 5 key categories of expenses.
2. Calculate the percent of the total expenses for each category.
3. Divide the pie into segments that are proportional to each percent.
4. Label each segment with the name and percent.

You may use excel for the pie graph – teacher will demonstrate.

Housing	400
Transportation	80
Food	325
Entertainment	108.33
Clothing	110
Miscellaneous	216.67



Case Study : Jane and Bob – Saving for a trip...

Over the upcoming year Jane and Bob want to save \$5000 for a trip at the end of the year. Their total net income is \$65 000 per year and they also earn \$75/month from their investments.

$$65000/12 = 5417 \qquad 75$$

Their current expenses are:

- bi-weekly mortgage and property tax payments of \$675 $675 \times 26/12 = 1463$
- \$650/year for home insurance and \$1050/year for car insurance $650/12 = 54$
- $1050/12 = 88$
- utility (water and electricity) costs that average \$230/month 230
- phone/cable costs of \$75/month 75
- vehicle lease of \$410/month 410
- average gasoline costs of \$175/month 175
- RRSP (retirement savings plans) contributions of \$225 bi-weekly $\$225 \times 26/12 = 488$
- grocery costs of \$160/week $160 \times 52/12 = 693$
- clothing costs of \$3000/year $3000/12 = 250$
- entertainment costs of \$120/week $120 \times 52/12 = 520$
- charitable donations of \$1000/year $1000/12 = 83$
- miscellaneous costs of \$150 bi-weekly. $150 \times 26/12 = 325$

- Convert all of the income and expense amounts to monthly values and label as fixed or variable.
- Design a monthly budget for Jane and Bob that shows fixed and variable costs.
- Can Jane and Bob meet their goal of saving \$5000 in one year for their trip?
 $\$638 \times 12 = \7656 Yes, they would meet their savings goal.
- If their net income was cut to \$60 000 per year can they still meet their savings goal?
 $\$5000/12 = \417 less per month. $\$638 - \$417 = \$221$ balance per month $\times 12 = \$2652$... No, they would not meet their savings goal.
- If not, what ways could they balance their budget?
 They may cut back clothing, entertainment, and miscellaneous expenses.

Jane and Bob's Monthly Budget

Income		
	Pay Income	5417
	Investment Income	75
	Total Income :	5492

Monthly Expenses		
Fixed		
	Mortgage, Property Tax	1463
	Home Insurance	54
	Car Insurance	88
	Vehicle Lease	410
	RRSP	488
	Total Fixed Expenses:	2503
Variable		
	Utilities	230
	Phone & Cable (could be fixed expense)	75
	Gasoline	175
	Grocery	693
	Clothing	250
	Entertainment	520
	Charitable Donations	83
	Miscellaneous	325
	Total Variable Expenses:	2351
	Total Expenses:	4854
	Balance :	638