Math 11 Apprenticeship & Workplace

**CHAPTER 7: Personal Budgets**

**Lesson 1: Reviewing Prior Concepts**

**Employment Income**

**Gross Income:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Net Income:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



Ex. 1: Terry earns a wage of $14.40 per hour. He is paid time and a half for any hours over 40 in a work week. Calculate Terry’s gross pay if he works:

a) 25 hours in a work week



b) 40 hours in a work week



c) 46 hours in a work week



**Percent Increase, Decrease, and Compound Interest**

Ex. 2: $250.00 is increased by 8%. What is the new value? What if it is decreased by 8%?



Ex. 3: Joe earns $1045.34 for a job. He needs to pay 30% in income tax.

a) What is Joe’s net pay?



b) What percent of the gross pay is his net pay?



**Solving Proportions**

Ex. 4 Jonathan earns $48 500.00 in 12 months. How much does he earn in 10 months?



**PRACTICE**



1. You earn $12.00 per hour. You are paid time and a half for any hours over 40 in a work week. Calculate your gross pay if you work:



a) 25 hours in a work week



b) 41 hours in a work week



c) 45 hours in a work week



1. Amy works at an electronics store and earns a base salary of $1250.00 per month plus 1.5% commission on all sales. Calculate Amy’s gross monthly income in September when she sold $48 000.00 in merchandise.



1. $420 is decreased by 30%. What is the new value?



1. $1290.00 is increased by 4.5%. What is the new value?



1. Jackie’s investment gained 5.25% in value over the past year. One year ago, the investment was valued at $13 550.00. What is the value of the investment now?



1. Rich invests $9000.00 earning 6.5% interest per year, compounded annually. Calculate the accumulated amount after:



a) 1 year



b) 3 years



1. Solve for *x* in each proportion:

a)  b)  c) 



1. If $340.00 represents 22% of Jill’s monthly income, how much is 15% of her monthly income?



**Lesson 2: Preparing to Make a Budget**



A **budget** helps you keep track of what you spend and earn.



* A budget compares expenses to income. A budget can show a:



\_\_\_\_\_\_\_\_\_\_\_\_ : income is greater than expenses, or



\_\_\_\_\_\_\_\_\_\_\_\_ : income is less than expenses.



* A budget helps you decide where you can reduce spending.
* A budget can help you plan and achieve financial goals.

**fixed expenses:** a cost that remains the same every month.

**variable expenses:** a cost that changes from month to month.

**recurring expenses:** costs that happen over and over

How can you analyze your expenses?



When creating a budget, you need to determine:



* your total expenses



* your **fixed** and **variable** expenses



* your total income from all sources.



Ex. 1: In the list below, complete each of the following:

* Circle the fixed expenses.
* Underline the variable expenses.
* Check any recurring expenses.



Car payment Clothing Cellphone Restaurants



Groceries Gas Movies Rent



Video Games Recreation Utilities Gym Membership



Insurance Gifts Vacation Car Repairs

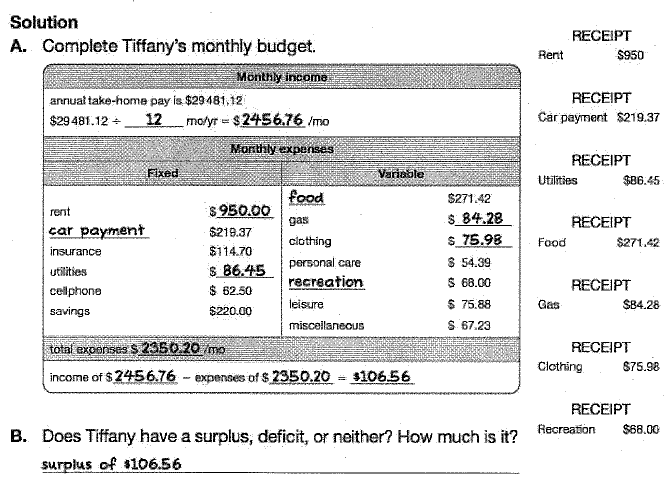


* Which expenses in the above list have **priority** over the others? List the 5 most important expenses.

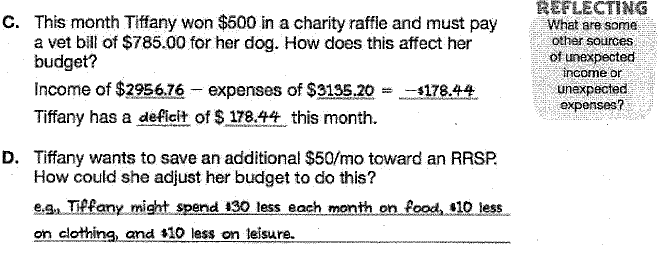


Ex. 2: Tiffany is a pharmacy technician. She tracked her expenses and income for a month. She has started a monthly budget. Continue Tiffany’s budget.







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Financial planners say to save by “paying yourself” 10% of your salary each month. Why do you think they suggest this?



**Lesson 3: The Budgeting Process**



Because a budget is mostly based on estimates (since most expenses are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_), it is best to plan to have money leftover.



**Conservative budget:** a budget that underestimates income and overestimates expenses.



Ex. 1: Observe the following record of financial transactions:



|  |  |  |
| --- | --- | --- |
| Groceries: $300.00 | Transportation:$45.00 | Rent: $800.00 |
| Paycheque: $1150.00 | Clothes: $25.00 | Entertainment: $320.00 |
| Restaurant meals: $80.00 | Paycheque: $1050.00 | Utilities: $65.00 |
| Cell phone: $75.00 | Internet and TV: $115.00 | Savings: $150.00 |

* How could you use these financial records to create a monthly budget?



* How do you know whether the expenses and income are balanced?



* If the income and expenses are not balanced, what could you do to adjust the budget?



* Do you think a budget based on just these data will be accurate? How could the budget be made more reliable?



We will research an activity together as a class and complete Activity 7.2 on Page 320-321. We will record our information on the following page and make a circle graph.



Our hobby or sport: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Associated fees:

**Lesson 4: Analyzing a Budget**

**Discuss the ideas:**

Sylvester and Aisha both live in apartments. Sylvester’s semi-monthly net pay is $950.00 and Aisha’s is $750.00

1. Which of them is likely to spend a larger percentage of his or her monthly income on basic needs (housing, food, transportation, clothing)? Explain your reasoning.
2. If Aisha completes her training as a pharmacy technician and earns an annual net salary of $22 900.00, by what percentage has her monthly income increased? What are some adjustments she might make to her budget?
3. Sylvester is paying off his student loan, which has an annual interest rate of 4.5%. Will he pay it off sooner if he pays $75.00 semi-monthly or $150.00 monthly? How would he budget differently for the two payment methods?

Ex. 1: Jessica’s annual savings are $2750.00 and account for 5% of her net pay. She would like to increase her savings to 12%.

a) How much will Jessica save annually if she makes this change?

b) How much will she save weekly?

c) What is Jessica’s net annual income?

d) Is saving 12% of this net annual income a reasonable amount?

Ex. 2: Michelle works her a landscaping business. Her take-home pay is $420.00 per week. She rents an apartment in a popular location and uses a bicycle and public transit for transportation. Michelle has been tracking her spending and finds that her approximate weekly expenses are:

|  |  |  |  |
| --- | --- | --- | --- |
| Rent: $230.00 | Food: $50.00 | Savings: $20.00 | Cell phone: $10.00 |
| Transportation: $10.00 | Debts: $30.00 | Entertainment/other: $70.00 |  |

Michelle has researched spending guidelines, shown here:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Donations | 10-15% | Food | 5-15% | Personal | 5-10% |
| Savings | 5-10% | Transportation | 10-15% | Recreation | 5-10% |
| Housing | 25-35% | Clothing | 2-7% | Debt payment | 5-10% |
| Utilities | 5-10% | Medical/health | 5-10% |  |  |

1. What changes would need to be made so that Michelle’s spending is within guidelines?
2. What is the maximum amount that Michelle should be spending on rent weekly?
3. Show Michelle’s spending on a circle graph.

Complete the Worksheet on the following page