



Math 1030
Taking Control of
Your Finances

Take Control of Your Finances

1. Know your bank balance.
2. Know what you spend.
3. Don't impulse buy.
4. Make a budget.

EX 1: Vern drinks three 6-packs of beer each week at a cost of \$7.00 each and spends \$700 per year on his textbooks. His beer expenses are what percent of his textbook expenses?

beer costs:

$$3(7)(52) = \$1092 \quad (\text{per year})$$

textbooks:

$$\$700$$

$$1092 = x(700)$$

$$1.56 = x$$

→ beer costs are 156% of
textbook costs each year

Master Budget Basics

Four-Step Budget:

1. List income.
2. List expenses.
3. Cash flow = Income - Expenses.
4. Make adjustments.

EX 2: Determine the cash flow for this person. Assume that salaries and wages are after taxes.

Income:

Salary: \$32,000/year

Pottery sales: \$200/month

total income:

$$32,000 + 12(200) \\ = \$34,400$$

Expenses:

House Pmt: \$700/mo

Groceries: \$150/wk

Home exp: \$450/mo

Health ins.: \$150/mo

Car ins.: \$500 semiannually

Donations: \$600/year

Misc: \$800/mo

$$700(12) + 150(52) + 450(12) \\ + 150(12) + 500(2) \\ + 600 + 800(12) \\ = \$34,600$$

⇒ cash flow:

$$\text{income} - \text{expenses} = 34,400 - 34,600 \\ = -\$200$$

EX 3: You currently drive 300 miles per week in a car that gets 15 mpg. You are considering buying a fuel-efficient car for \$12,000 (after trade-in) that gets 50 mpg. Insurance premiums are \$800 for the new car and \$600 for the old one. You anticipate spending \$1200 per year on repairs for the old car and having no repairs on the new one. Assume gas costs \$3.50 per gallon. Over a five-year period, what do you gain/lose by getting the new car?

old car

\$600 insurance

\$1200 repairs

$$\frac{300 \cancel{\text{mi}}}{\cancel{\text{wk}}} \left(\frac{1 \cancel{\text{gal}}}{15 \cancel{\text{mi}}} \right) \left(\frac{\$3.50}{\cancel{\text{gal}}} \right) \left(\frac{52 \cancel{\text{wk}}}{1 \text{ yr}} \right)$$

$$= \$3640/\text{yr gas}$$

new car

\$800 insurance

\$0 repairs

$$\frac{300 \cancel{\text{mi}}}{\cancel{\text{wk}}} \left(\frac{1 \cancel{\text{gal}}}{50 \cancel{\text{mi}}} \right) \left(\frac{\$3.50}{\cancel{\text{gal}}} \right) \left(\frac{52 \cancel{\text{wk}}}{1 \text{ yr}} \right)$$

$$= \$1092/\text{yr gas}$$

5-yr total:

$$(600 + 1200 + 3640)5$$

$$= \$27,200$$

5-yr total:

$$(800 + 1092)5 + 12,000$$

$$= \$21,460$$

⇒ over 5 years, the new car will
save $27,200 - 21,460 = \$5,740$

	High School only	Associate's degree	Bachelor's degree	Professional degree
Women	\$21,113	\$39,286	\$49,108	\$80,718
Men	\$40,447	\$50,928	\$66,196	\$119,474

EX 4: The table above shows median annual earnings (in 2011) for women and men with various levels of education. Assuming the difference shown remains constant over a 40-year career, approximately how much less does a woman with a bachelor's degree earn than a woman with a professional degree?

difference:
(annually)

$$80,718 - 49,108 = \$31,610$$

$$40(31610) = \$1,264,400$$