

* Budget Plan Project

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THINGS I NEVER LEARNED IN HIGH SCHOOL

<http://9gag.com>

- How to do taxes
- What taxes are
- How to vote
- How to write a resume/cover letter
- Anything to do with banking
- How to apply for loans for college
- How to buy a car or house...

...but thank my lucky stars, I can tell
you all about *Pythagorean Theorems*.

*What we are trying to
avoid..

*SSBAT

* Learn the mathematics involved in budgeting

* Understand taxes

* Have a realistic view on careers and standards of living

* See the pros and cons of credit cards & loans

* Understand total cost of car ownership

* Create their own personal real life budget

* Student Objectives



* Professional Career
Technical Career
General Career

Broad Category	2013 Average salary
Business	\$55,144
Communications	\$44,552
Computer Science	\$59,084
Education	\$40,590
Engineering	\$62,564
Health Sciences	\$52,800
Humanities & Social Sciences	\$38,045
Math & Sciences	\$42,956

* Professional

* Broad Category	2013 Average Salary
Skilled Maintenance	\$44,420
Construction	\$45,630
Food Services	\$33,640
Protective Service	\$43,510
Healthcare Support Occupations	\$28,300
Personal Care	\$24,710
Arts, Entertainment, Sports, and Media	\$55,580
Office & Administrative Support	\$34,900
Transportation & Material Moving	\$33,860

* Technical Career

* Broad Category	2013 Average Salary
Maintenance (i.e. grounds keeping)	\$26,010
Food services	\$21,580
Production (i.e. factory)	\$34, 930
Sales/Retail	\$25, 580

*** General Career**

* Single Person

Federal Income Tax Bracket

$\$0 \leq x < \$2,250$	0%
$\$2,250 \leq x < \$11,325$	10%
$\$11,325 \leq x < \$39,150$	15%
$\$39,150 \leq x < \$91,600$	25%
$\$91,600 \leq x < \$188,600$	28%
$\$188,600 \leq x < \$407,350$	33%
$\$407,350 \leq x < \$409,000$	35%
$x \geq \$409,000$	39.6%

* Income Taxes

* Suppose you earn \$35,000. Then your income falls in the third tax bracket (15%). You pay 15% on the amount of your income that is over \$11,325. You pay 10% on the first \$11,325 of your income.

* $(0.10)(\$11,325) = \$1,132.50$

* $(0.15)(\$35,000 - \$11,325) = (0.15)(\$23,675) = \$3,551.25$

* Your tax = 10 % amount + 15 % amount = $\$1,132.50 + \$3,551.25 = \$4,683.75$

* $\$3,551.25 / \$35,000 = 0.10146 = 10.146 \%$

* not exactly 10% or 15% because part is taxed differently

* **Example**

- * Most students don't understand by using a credit card you are building a line of credit, which is an account with money that you can BORROW and must pay back
- * Choosing a credit card
- * APR: Introductory annual percentage rate is a low rate offered by a credit card company as an incentive to apply for the card. The APR will go up after the introductory period is over.
- * Late fees

* **Credit Cards**

* Let's pretend that you have a credit card with a \$1,500 balance on it. Your card gives you up to 20 days to make a payment without any penalties or fees. It is now 30 days since the bill was due. The card has an APR of 12% as well as a \$10 late fee and a 2% minimum payment plus interest.

* Interest:

$0.12/12 \text{ months} = 0.01\% \text{ interest for the month}$

$0.01083 \times \$1,500 = \15.00

Minimum Payment:

$0.02 \times \$1,500 = \30

For this card, the minimum payment will be 2% of the balance + the interest + the late fee.

$\$30 + \$15.00 + \$10 = \55.00

You would at least need to pay \$55.00 to keep your account in good standing.

* **Example**

- * Purchase a “big ticket item” with a \$2000 minimum
- * Enjoy your big purchase, paying only the minimum! Assume that the minimum is 2% of your account balance (or \$10)

*** Buy your first “Big Ticket Item”**

Month 1

Beginning Balance: \$2,200

Finance Charge: $\$2,200 * (17.74 \% / 12) = \32.52

Minimum Payment: $\$2,200 * 2\% = \44

New Balance: $\$2,200 + \$32.52 - \$44 = \2188.52

Month 2

Beginning Balance: \$2188.52

Finance Charge: $\$2188.52 * (17.74\% / 12) = \32.35

Minimum Payment $\$2188.52 * 0.02 = \43.77

New Balance: $\$2188.52 + \$32.35 - \$43.77 = \2177.10

Ect..The rest can be easily computed via excel methods

***Excel to pay the
minimum**

- * Financial Experts recommend 10-15% on transportation a month
 - * $0.15(\text{monthly take home pay}) = \text{Max monthly transportation expenditure}$
 - * $0.10(\text{monthly take home pay}) = \text{Max car payment}$

*** Buying your first set of wheels**

* Many Car loans are calculated using the amortization formula where the interest each month is calculated using the remaining principal

* Let C =monthly car payment

P =principal of loan

r =annual percentage rate

m =the term of the loan in months

$$C = \frac{P \left(\frac{r}{12} \right)}{\left[1 - \left(1 + \frac{r}{12} \right)^{-m} \right]}$$

$$P = C \cdot \left(\frac{12}{r} \right) \cdot \left[1 - \left(1 + \frac{r}{12} \right)^{-m} \right]$$

* **Mathematics behind
the calculations**

Loan Principal				
Loan Term (months)	36	60	36	60
Interest Rate	5%	5%	10%	10%
Monthly Payment				
Total Amount Paid				

* *A few ways to save on your car loan:*

- * *Make a down payment to reduce the loan principal*
- * *Consider buying a less expensive new car*
- * *Consider buying a newer used car*

New cars lose approx 20% of its value as soon as you drive it off the lot.

* Interest Rates & Loan Terms Effect Total Loan Cost

Toyota Camry Hybrid XLE	BMW 750Li
Scion xB	Jeep Wrangler Unlimited Sahara
Toyota Camry LE (4-cyl.)	Cadillac XTS Premium
Subaru Forester 2.5i Premium	Lincoln MKX (3.7)
Toyota Corolla LE Plus	Lincoln MKS (base, 3.7)
Honda Civic EX	Ford Explorer XLT (V6)
Honda Civic Hybrid	Ford F-250 Lariat (6.7L, V8)
Subaru Impreza Premium	Nissan Pathfinder SL
Maxda3 I Touring (sedan)	Nissan Titan SV (5.6L, V8)

* Best bang for your buck on new cars

- * Depreciation
- * Taxes & Fees
- * Financing
- * Fuel
- * Insurance
- * Maintenance & Repairs

All added costs will be put in students budget table

*** True Cost to Own**

- * Scholarships
- * Grants
- * Work study
- * loans

* Different types of
school aids

* William D. Ford Direct Loans

- * Direct Subsidized Loans
- * Direct Unsubsidized Loans
- * Direct PLUS Loans
- * Direct Consolidation Loans

* Federal Perkins Loan

- * ≤\$5,500 per year in Perkins Loans
- * \$5,500 to \$12,500 per year in Direct Subsidized and Unsubsidized Loans

* **How much can I
borrow as an
undergrad**

- * interest rate is almost always lower than that on private loans
- * no credit check or a cosigner required
- * no repayment until ...
- * you can qualify to have the government pay your interest
- * Federal student loans offer flexible repayment plans
- * you may be eligible for loan forgiveness

*** Why should I take out federal student loans?**

Do not forget to complete your FAFSA
Annually and on time!!

Interest Rates for Direct Loans First Disbursed on or After July 1, 2013

Loan Type	Borrower Type	Loans first disbursed on or after 7/1/13 and before 7/1/14	Loans first disbursed on or after 7/1/14 and before 7/1/15
Direct Subsidized Loans	Undergraduate	3.86%	4.66%
Direct Unsubsidized Loans	Undergraduate	3.86%	4.66%
Direct Unsubsidized Loans	Graduate or Professional	5.41%	6.21%
Direct PLUS Loans	Parents and Graduate or Professional Students	6.41%	7.21%

All interest rates shown in the chart above are fixed rates for the life of the loan

Loan Type	First Disbursement Date	Loan Fee
Direct Subsidized Loans and Direct Unsubsidized Loans	On or after 12/1/13 and before 10/1/14	1.072%
	On or after 10/1/14 and before 10/1/15	1.073%
Direct PLUS Loans	On or after 12/1/13 and before 10/1/14	4.288%
	On or after 10/1/14 and before 10/1/15	4.292%

* Are there any other fees?

If your Total Education Loan Indebtedness is...		...your Repayment Period will be...
At Least	Less Than	
	\$7,500	10 years
\$ 7,500	\$10,000	12 years
\$10,000	\$20,000	15 years
\$20,000	\$40,000	20 years
\$40,000	\$60,000	25 years
\$60,000		30 years

*** Max time allowed to repay loans**

- * 7 out of 10 students have loans
- * Average loan debt of \$24,900
- * 1 million college students denied aid
- * 1 in 10 students default in first two years

* College Loan Facts

- * Choose a school and determine its yearly tuition.
- * Research the annual cost to attend this institution.
- * Multiply by however many years you plan to attend.
- * Determine the percentage you will need assistance with while attending.
- * This will be the amount you will need to take out in student loans.

*** Where do you want
to go to school?**

- * Percentage of Discretionary Income
- * Amount $>$ the poverty line but \leq your income
- * \$11,670 in Continental US
- * \$14,580 in Alaska
- * \$13,420 in Hawaii
- * Monthly Loan Payments are capped at 15%

* What are Loan Repayment plans based on?

$$\text{Interest Rate Factor (IRF)} = \frac{\text{Interest Rate}}{\# \text{ days per year}}$$

$$\text{Interest} = \text{Balance} * \# \text{ of days since last payment} * \text{IRF}$$

$$C = \frac{P \left(\frac{r}{12} \right)}{\left[1 - \left(1 + \frac{r}{12} \right)^{-n} \right]}$$

And use a [resource!](#)

* Lets Calculate our
Loan Payments

* Budget Plan

	Monthly	Yearly
Starting Salary		
Payroll Deductions		
Federal Income tax		
State Tax		
Medicare & S.S.		
Total Deductions		
Take-Home Pay		
Necessary Expenses		
Rent		
Food		
Electricity		
Phone		
Car Payment		
Car Insurance		
Gas		
Car Maintenance		
Transportation		
Discretionary Expenses		
Internet		
Cable		
Clothing		
Entertainment		
Other		
Total Expenses		
Savings		
Emergency fund		
Expenses + Savings		