

Take out the notes you took on the loan practice on local and global debt. Compare and contrast what you found with your randomly generated group and prepare to share with the class.

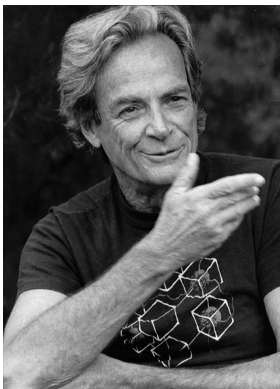
car loan loan
interest for the month
kill the debt
rate
interest
to principal
loan balance
algebra
amortization

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Recall prohibitions against charging interest on money to members of the local community (usury), but was ok for global strangers—lending to one's neighbors was considered philanthropy and part of a giving back to the community.

Richard Feynman quote connects geometry to finance



doorofperception.com/wp-content/uploads/doorofperception.com-richard_feynman-2.jpg

There are 10^{11} stars in the galaxy. That used to be a huge number. But it's only a hundred billion. It's less than the national deficit! We used to call them astronomical numbers. Now we should call them economical numbers.

Loan Payments and Amortization

$$\text{payment} = \frac{\text{loan amount } r}{1 - (1 + r)^{-n}} = \frac{14500 \cdot \frac{.12}{12}}{(1 - (1 + \frac{.12}{12})^{(-12 \times 4)})} =$$

Loan Payments and Amortization

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Work with your group on the amortization table:

month	Payment	Interest Paid	Principal Paid	Loan Balance
1	381.84			

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Work with your group on the amortization table:

month	Payment	Interest Paid	Principal Paid	Loan Balance
1	381.84	\$145 $14500 \cdot \frac{.12}{12}$	\$236.84 $381.84 - 145$	\$14,263.16 $14500 - 236.84$
2	381.84	\$142.63 $14263.16 \cdot \frac{.12}{12}$	\$239.21 $381.84 - 142.63$	\$14,023.95 $14263.16 - 239.21$
3	381.84	\$140.24 $14023.95 \cdot \frac{.12}{12}$	\$241.60 $381.84 - 140.24$	\$13,782.35 $14023.95 - 241.60$

Work with your group on the total paid and total interest:

- total paid =

Loan Payments and Amortization

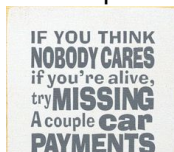
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Work with your group on the total paid and total interest:

- total paid = $381.84 \times 12 \times 4$ – overpayment (none here)
- total interest = total paid - loan = last response – 14500



	8/28	43257454	PAYMENT THANK YOU			-150.00
8/08	8/08	BTXWGX2X	PAPA JOHN S PIZZA	BOONE	NC	9.53
8/15	8/15	CY62CF00	MICHAELS STORES, INC. #50	RALEIGH	NC	43.45
8/18	8/18	W6PSB300	HARRIS TEETER 165 SAA	BOONE	NC	25.86
8/18	8/18	QRVGLHGO	BP OIL 47653449	BURLINGTON	NC	10.00
8/19	8/19	4MDWYYG9	WAL MART	BOONE	NC	9.01
8/20	8/20	KN48HZG9	WAL MART	BOONE	NC	13.29
8/21	8/21	HY3LXZG9	WAL MART	BOONE	NC	37.43
8/21	8/21	NR9XK600	HARRIS TEETER 165 SAA	BOONE	NC	11.85
8/21	8/21	QVKGVFD*	EXXON USA 7540945909	BOONE	NC	10.00
8/24	8/24	GKD8V600	HARRIS TEETER 165 SAA	BOONE	NC	18.06
8/24	8/24	VTJTGX00	UNIVERSITY BOOK STORE	BOONE	NC	24.33
8/25	8/25	BJ5XGX00	UNIVERSITY BOOK STORE	BOONE	NC	39.75
8/26	8/26	*L*ZGX00	UNIVERSITY BOOK STORE	BOONE	NC	15.90
8/26	8/26	OK*ZGX00	UNIVERSITY BOOK STORE	BOONE	NC	20.74
8/29	8/29	3D1KMSY2	CITGO6162 BOONE CITGO	BOONE	NC	12.10

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CHANGING YOUR ADDRESS? LET US KNOW.

Maintain your good credit rating. Keep us informed of your new address. When you move, please correct your address on the payment coupon or call Citibank Customer Service

Account Summary						Amount Due	
	Previous Balance	(+) Purchases & Advances	(-) Payments	(-) Credits	(+) FINANCE CHARGE	(+) Late Charges	(-) New Balance
Purchases	347.12	301.30	150.00		6.71		505.13
							Purchases Minimum Due 20.00
							Advances Minimum Due
							Amount Over Credit Line
							Fees

Credit Card Finance Charge=Interest Paid that Month

	Previous Balance	(+) Purchases & Advances	(-) Payments	(-) Credits	(+) <u>FINANCE CHARGE</u>	(+) Late Charges	(=) New Balance
Purchases	347.12	301.30	150.00		6.71		505.13
Advances							
Total	347.12	301.30	150.00		6.71		505.13

Rate Summary		Purchases	Advances
Number of days this Billing Period	29		
Balance Subject to Finance Charge		449.67	
Periodic Rate (Purchases-Monthly, Advances-Daily)		1.49170%	.04904%
Nominal Annual Percentage Rate		17.900%	17.900%
<u>ANNUAL PERCENTAGE RATE</u>		17.900%	17.900%

finance charge = monthly interest

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finance charge = monthly interest

= average daily balance \times periodic rate

$$= 449.67 \times \frac{.179}{12}$$

calculate and compare with \$6.71 shown on the statement

Algebraic Ratios for Finance

- Dividing reward/risk is a common ratio to compare risk versus reward. Risking \$500 to gain millions in a lottery is a much better investment than investing in the stock market from a reward/risk perspective (millions/500). However, it is a much worse choice in terms of the probability of losing all your money!
- debt-to-income ratio
 $35\% = \frac{\text{monthly debt}}{\text{monthly income}}$. What if the monthly debt is \$700?

STOP THE PAYDAY LOAN DEBT TRAP

