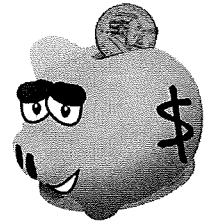


Monthly Payment 101



While spending only \$2,000 to take home a brand new Toyota Camry may sound like a lot of fun, paying on that loan for 72 months may not be. In the United States, the commentary after our last economic collapse was that Americans tend to buy things out of their reach. Homes, cars, televisions, you name it, we buy it. Perhaps shortsighted buyers expect a promotion that never comes or are on the receiving end of an unforeseen accident or illness. Nonetheless understanding budgets and monthly payments is an essential component of an individual's financial literacy.

In this assignment, you will use a slightly intimidating looking equation: $P = \frac{Cr(1+r)^N}{(1+r)^N - 1}$ where...

P = monthly payment, C = loan amount, N = the number of months and
 r = monthly interest rate (a 7.5% annual rate would be converted to a decimal and divided by 12; .075/12 so 0.00625)

You will need to plug values into the formula and use the order of operations to calculate the monthly payments for the situations below. You'll also determine the total amount of money the individual ends up spending on monthly payments. The difference between this amount and the original price tag is the *interest* on the loan. Help these individuals figure out if the monthly payment fits in their budget and is worth it to them in the long run.

Name _____

Date _____

Period _____



Jessica is considering borrowing \$ 15,000 for a new Ford Fusion if...

the monthly payment is less than \$ 250 and
 the total cost is less than \$ 16,000

Equation Space:

1. Based on your calculations, does the monthly payment fit into Jessica's budget?

2. How much interest is Jessica going to owe? Will it put her over her goal of \$16,000?

3. Would you recommend this loan for her? Why or why not?

| Huffington Bank Loan Offer | |
|--|-----------|
| Loan Amount (c) | \$ 15,000 |
| Annual Interest Rate | 6.0% |
| Monthly Interest Rate (r) | .005 |
| Number of Months (n) | 72 |
| Monthly Payments (P) will be... \$ | |

| Long Term Cost | |
|--------------------------|--|
| Number of Months (n) | |
| Monthly Payments (P) | |
| Total Cost (nP) | |
| | |
| Interest ($nP - c$) | |



Cesar is considering borrowing \$8,000 to get hot tub if...

the monthly payment is less than \$400 and he can pay it off in less than two years.

Equation Space:

1. With this loan, what will the monthly payment be? Will he be able to pay it off in less than two years?

2. How much interest will Cesar need to pay on this loan? How could he reduce this amount?

| AmeriBank Loan Offer | |
|--|---------|
| Loan Amount (c) | \$8,000 |
| Annual Interest Rate | 8.4% |
| Monthly Interest Rate (r) | |
| Number of Months (n) | 24 |
| Monthly Payments (P) will be... \$ | |

| Long Term Cost | |
|--------------------------|--|
| Number of Months (n) | |
| Monthly Payments (P) | |
| Total Cost (nP) | |
| | |
| Interest ($nP - c$) | |



Dawne is considering borrowing \$35,000 to invest in a local business if...

the monthly payment is less than \$800 and the total cost is less than \$40,000

Equation Space:

1. With the loan offer from Sixth/Third, is the monthly payment less than \$800?

2. How much interest will Dawne have to pay on this loan? Will it put her total over \$40,000?

| Sixth/Third Loan Offer | |
|--|----------|
| Loan Amount (c) | \$35,000 |
| Annual Interest Rate | 4.75% |
| Monthly Interest Rate (r) | |
| Number of Months (n) | 60 |
| Monthly Payments (P) will be... \$ | |

| Long Term Cost | |
|--------------------------|--|
| Number of Months (n) | |
| Monthly Payments (P) | |
| Total Cost (nP) | |
| | |
| Interest ($nP - c$) | |



Jeff is considering borrowing \$ 12,000 to enroll in another semester of college, but he's trying to decide between two different bank offers. Which is better?

| J.C. Porgan Bank Loan Offer | | Silverman Slacks Bank Loan Offer | |
|------------------------------------|-----------|------------------------------------|-----------|
| Loan Amount (c) | \$ 12,000 | Loan Amount (c) | \$ 12,000 |
| Annual Interest Rate | 3.5% | Annual Interest Rate | 3.75% |
| Monthly Interest Rate (r) | | Monthly Interest Rate (r) | |
| Number of Months (n) | 72 | Number of Months (n) | 60 |
| Monthly Payments (P) will be... \$ | | Monthly Payments (P) will be... \$ | |
| Long Term Cost | | Long Term Cost | |
| Number of Months (n) | | Number of Months (n) | |
| Monthly Payments (P) | | Monthly Payments (P) | |
| Total Cost (nP) | | Total Cost (nP) | |
| Interest (nP - c) | | Interest (nP - c) | |

Calculation Space

1. From your calculations compare the monthly payments of the two banks. Whose monthly payment is lower? What is the difference between the loans?
2. When considering the long-term, what are the total costs of the loans from each bank? Which bank has a lower total?
3. All things considered, which loan do you think Jeff should take? Explain.



Marcy is considering borrowing \$65,000 to make an addition onto her home. She has offers from two different banks and needs to make a decision. She would prefer a monthly payment around \$800 a month, but doesn't want to pay too much money in interest. Which offer is better for her?

| Capital Two Bank Loan Offer | | Stanley Morgan Bank Loan Offer | |
|------------------------------------|----------|------------------------------------|----------|
| Loan Amount (c) | \$65,000 | Loan Amount (c) | \$65,000 |
| Annual Interest Rate | 7.5% | Annual Interest Rate | 6.75% |
| Monthly Interest Rate (r) | | Monthly Interest Rate (r) | |
| Number of Months (n) | 144 | Number of Months (n) | 108 |
| Monthly Payments (P) will be... \$ | | Monthly Payments (P) will be... \$ | |
| Long Term Cost | | Long Term Cost | |
| Number of Months (n) | | Number of Months (n) | |
| Monthly Payments (P) | | Monthly Payments (P) | |
| Total Cost (nP) | | Total Cost (nP) | |
| Interest (nP - c) | | Interest (nP - c) | |

Calculation Space

1. Based on your calculations, compare the monthly payments of the two banks? Whose monthly payment is lower? What is the difference between the loans? Do they both meet Marcy's requirement?
2. When considering the long-term, what are the total costs of the loans from each bank? Which bank has a lower total?
3. Considering the short-term and long-term, which loan do you think Marcy should take? Explain.