The minimum-payment trap

Name: _____ Class: _____ Date: _____

Card companies set the minimum payment low on purpose. This worksheet shows why paying only the minimum takes so long.

The card: $3,000 balance, 22.36% APR (the Federal Reserve average for cards that charge interest).

Monthly interest = balance × 22.36% ÷ 12 = balance × 1.8633%.

Minimum payment = that month's interest + 1% of the balance, never less than $25. No new purchases.

Part A. Work out the first three months

Round to the cent. The new balance is the old balance + interest − payment.

Month	Balance at the start	Interest this month	Minimum payment	New balance
1	$3,000.00			
2				
3				

1. How much did the balance fall in three months, in dollars?

   _____

2. Of the three payments together, how much went to interest?

   _____

Minimum payment trap worksheet. Consolidation Loan Guide (debt-consolidation-loan.co/credit-card-payoff-calculator/). CC BY 4.0: share and adapt with credit. Average card rate: Federal Reserve G.19 (accounts assessed interest).

Part B. Minimum or a fixed payment?

Open the credit card payoff calculator at debt-consolidation-loan.co/credit-card-payoff-calculator/. Enter a $3,000 balance, the 22.36% rate, and each payment below.

Each month you pay	Months until paid off	Total interest
Only the minimum (it shrinks as the balance falls)		
A fixed $86 (the first minimum, kept the same)		
A fixed $150		
A fixed $300		

The minimum-only row cannot be entered as one number. Use the answer your teacher gives, or work it out month by month as in Part A.

Part C. Think it through

3. Why does a minimum that is "interest + 1%" take so long to clear a card?

4. Keeping the payment fixed at the first minimum, instead of letting it shrink, changes the result a lot. Why?

5. A loan at 11.9% over 3 years would cost about $99 a month on $3,000. When would that be a better plan than the card?

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Answer key

Same formulas as the site's credit card payoff calculator. Small rounding differences are fine.

Part A

Month	Balance at the start	Interest	Minimum payment	New balance
1	$3,000.00	$55.90	$85.90	$2,970.00
2	$2,970.00	$55.34	$85.04	$2,940.30
3	$2,940.30	$54.79	$84.19	$2,910.90

1. The balance fell by $89.10: exactly 1% of the balance each month, because the rest of the minimum is interest.
2. $166.03 of the $255.13 paid went to interest.

Part B

Each month you pay	Months until paid off	Total interest
Only the minimum	180 months (15 years)	$4,515
A fixed $86	57 months (4 years and 9 months)	$1,890
A fixed $150	26 months (2 years and 2 months)	$789
A fixed $300	12 months (1 year)	$351

Part C (sample answers)

3. Most of each minimum is interest, so only 1% of the balance is repaid each month. As the balance falls, the payment falls too, and the debt drags on.
4. A fixed payment keeps the part that repays the balance growing as interest shrinks. At a fixed $86 the card is clear in 57 months instead of 180.
5. When the loan's rate is well below the card's and the cards are not used again. About $99 a month for 3 years costs about $582 in interest.