



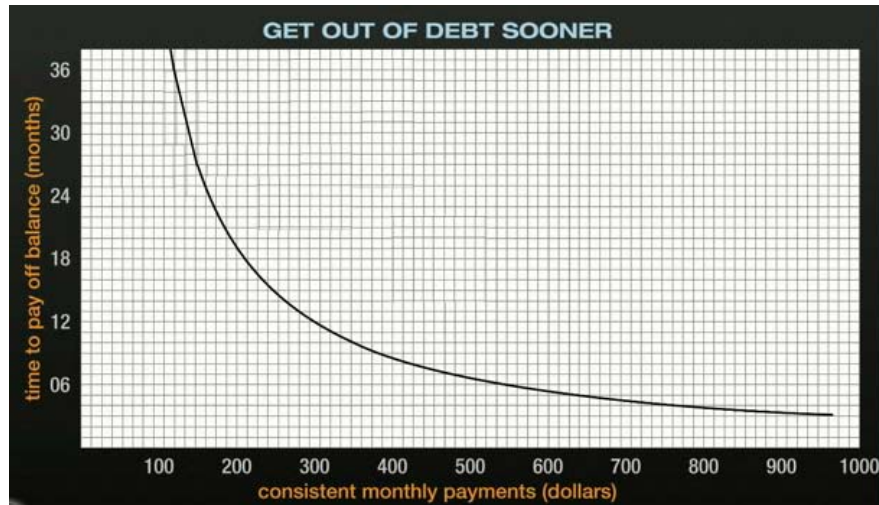
Chris is working to pay off his credit card debt. He has stopped making purchases on his card and wants to set up a plan to pay off the balance he has already accumulated. Consider the options below to help Chris determine a reasonable repayment plan.

Problem 1: Chris's starting balance is \$3,044. If he follows a plan of making only the minimum payment each month it will take 11 years and 7 months to pay off the balance, and with the accrued interest he will pay a total of \$5,875.05. How much will Chris end up paying in interest alone with this plan?

Problem 2: Credit card statements also give an amount necessary to pay off the total balance in three years. In this case, the amount is \$122. Here is a table showing the three-year payment plan. If Chris follows this plan, how much sooner will he pay off his balance, and how much will Chris save in interest compared to the minimum-payment plan?

Month	Current Balance	Payment	Balance After Payment	Interest Charge	New Balance
Month 1	\$3,044.39	\$122.00	\$2,922.39	\$60.64	\$2,983.03
Month 2	\$2,983.03	\$122.00	\$2,861.03	\$59.37	\$2,920.40
Month 3	\$2,920.40	\$122.00	\$2,798.40	\$58.07	\$2,856.46
Month 4	\$2,856.46	\$122.00	\$2,734.46	\$56.74	\$2,791.20
Month 5	\$2,791.20	\$122.00	\$2,669.20	\$55.39	\$2,724.59
Month 6	\$2,724.59	\$122.00	\$2,602.59	\$54.00	\$2,656.59
Month 7	\$2,656.59	\$122.00	\$2,534.59	\$52.59	\$2,587.19
Month 8	\$2,587.19	\$122.00	\$2,465.19	\$51.15	\$2,516.34
Month 9	\$2,516.34	\$122.00	\$2,394.34	\$49.68	\$2,444.02
Month 10	\$2,444.02	\$122.00	\$2,322.02	\$48.18	\$2,370.20
Month 11	\$2,370.20	\$122.00	\$2,248.20	\$46.65	\$2,294.85
Month 12	\$2,294.85	\$122.00	\$2,172.85	\$45.09	\$2,217.94
Month 13	\$2,217.94	\$122.00	\$2,095.94	\$43.49	\$2,139.43
Month 14	\$2,139.43	\$122.00	\$2,017.43	\$41.86	\$2,059.29
Month 15	\$2,059.29	\$122.00	\$1,937.29	\$40.20	\$1,977.49
Month 16	\$1,977.49	\$122.00	\$1,855.49	\$38.50	\$1,893.99
Month 17	\$1,893.99	\$122.00	\$1,771.99	\$36.77	\$1,808.76
Month 18	\$1,808.76	\$122.00	\$1,686.76	\$35.00	\$1,721.76
Month 19	\$1,721.76	\$122.00	\$1,599.76	\$33.20	\$1,632.96
Month 20	\$1,632.96	\$122.00	\$1,510.96	\$31.35	\$1,542.31
Month 21	\$1,542.31	\$122.00	\$1,420.31	\$29.47	\$1,449.78
Month 22	\$1,449.78	\$122.00	\$1,327.78	\$27.55	\$1,355.33
Month 23	\$1,355.33	\$122.00	\$1,233.33	\$25.59	\$1,258.92
Month 24	\$1,258.92	\$122.00	\$1,136.92	\$23.59	\$1,160.51
Month 25	\$1,160.51	\$122.00	\$1,038.51	\$21.55	\$1,060.06
Month 26	\$1,060.06	\$122.00	\$938.06	\$19.46	\$957.53
Month 27	\$957.53	\$122.00	\$835.53	\$17.34	\$852.87
Month 28	\$852.87	\$122.00	\$730.87	\$15.17	\$746.03
Month 29	\$746.03	\$122.00	\$624.03	\$12.95	\$636.98
Month 30	\$636.98	\$122.00	\$514.98	\$10.69	\$525.66
Month 31	\$525.66	\$122.00	\$403.66	\$8.38	\$412.04
Month 32	\$412.04	\$122.00	\$290.04	\$6.02	\$296.06
Month 33	\$296.06	\$122.00	\$174.06	\$3.61	\$177.67
Month 34	\$177.67	\$122.00	\$55.67	\$1.16	\$56.83
Month 35	\$56.83	\$56.83	\$0	\$0	\$0

Problem 3: Today Chris made \$23 in tips. Say he is disciplined and puts \$23 more toward his payment each month. Then his payments will be \$145. Below is a graph that shows consistent monthly payments and the corresponding time it takes to pay off the current balance. Using the graph to estimate, how much sooner will Chris pay off his balance by paying \$145 each month rather than \$122?



Problem 4: Does adding \$23 to any monthly payment result in the balance being paid off seven months sooner? What is the approximate difference in the amount of time it will take to pay off the balance owed if we compare \$300 payments to \$323 payments?