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Credit Card Catastrophe
You used your credit card to charge $\$ 50$ for your favorite teacher's birthday present. The credit card companies charge $18 \%$
ANNUAL interest rate if you don't pay off your balance. You lose the bill, and forget to pay to the credit card company. Answer the questions that follow.

1) Complete the following table and graph to show the amount of money you owe the credit card company.

| Number of <br> MONTHS | 0 | 1 | 2 | 3 | 4 | 12 | 24 | 36 | 56 |
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| Amount Owed |  |  |  |  |  |  |  | 80 |  |


| 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $x$ |
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| -8 | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 80 |
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| (37) -170 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

2) Write a function rule to model this situation.
3) How much money would you owe after 5 years? Show your work.
4) How much money would you owe after 10 years and 5 months? Show your work.
5) How long before you will owe the company $\$ 200$ ? Show your work.
6) What advice would you give to a person who just received their first credit card?
