For full credit, show all your work and explain your answers.

## Equations:

Compound Interest: 
$$F = P\left(1 + \frac{r}{n}\right)^{nt}$$

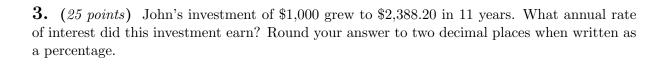
$$F = P + Prt$$

APY:  

$$Y = \left(1 + \frac{r}{n}\right)^n - 1$$

1. (25 points) The current price of a new Toyota RAV4 is \$24,300. What was the price of the same car 4 years earlier if the price was increasing by 3.6% annually?

2. (25 points) A student took a \$2,000 loan with 10% annual simple interest. What was the term of the loan (in months) if she had to repay \$2,150?



**4.** (25 points) The current balance of your credit card is \$2,000. You plan to pay off the entire account in full in 3 years. What will be the payment amount if you are beng charged 12% annual interest compounded daily?

ars for which th	nis principal mu	ıst be invested	in order to gro	w to \$10,000?
			of an investme written as a p	nt at $8\%$ compound ercentage.

7. (25 points) In a certain year Blockbuster Video customers rented 880 million videos out of
the 3.7 billion videos rented that year. What percent of the videos did Blockbuster customers
rent? Round your answer to the nearest hundredth of a percent.

- $\bf 8.~$  (25 points) In 1980 the Federal Deficit was \$0.9 trillion dollars. In 2000 it was \$5.67 trillion dollars.
- A) What percent of the 1980 deficit was the 2000 deficit?
- B) How much did the deficit change from 1980 to 2000? What percent change does this represent?