This quiz is worth 25 points. You should clearly show all of your work and justify your answers where appropriate.

- 1. $\boxed{13 \text{ points}}$ John makes monthly payments of \$342.15 on his five-year car loan at 6.9% compounded monthly. The original value of the loan was \$17,320.50.
 - (a) If he just made the 23rd monthly payment, what is his current payoff amount?

(b) What part of the 24th monthly payment is interest?

- 2. 12 points Suppose that you owe \$1250 on a credit card that charges 16.5% interest compounded monthly. You make no new purchases, but can you only afford to pay \$35 per month on the card.
 - (a) How many months will it take for you to pay off the debt?

(b) About how much will the last payment need to be?