Name: _____

1. Wendy is trying to save up money for her daughter's first car. Her savings account earns 2.5% interest (compounded monthly).

   (a) If Wendy deposits $100 a month into her account, how long will it take her to save up $7,500 to put towards the car? [Remember to round up to the next whole period.]

   _____ years and _____ months

   Enter the Excel command(s) you used to find your answer:

   (b) Wendy's last deposit doesn't need to be a full $100, find the amount of her final (partial) deposit.

   _____

   Enter the Excel command(s) you used to find your answer:

   (c) Suppose Wendy deposits $100 a month for 4 years and then quits saving and lets the money stay in the account an additional 3 years. How much will be in the account at the end of 7 years?

   _____

   Enter the Excel command(s) you used to find your answer:

2. Carl won the lottery. He will be paid $50,000 a year for 20 years (at the beginning of each year). If the lottery plans to withdraw this money from a secure investment which earns 5% compounded annually, how much do they need in their account to cover Carl's winnings?

   _____

   Enter the Excel command(s) you used to find your answer:

3. If your "friend" loans you $5,000 and makes you pay him $250 a month for 3 years, what interest rate are you being charged (compounded monthly)? [Show at least 3 decimal places: XXX.XXX%]

   _____

   Enter the Excel command(s) you used to find your answer:

4. The Capone "family" just bought a $1,250,000 house. They put 20% down and took out a 30 year mortgage with a 4.25% interest rate (compounded monthly).

(a) What is their down payment? _____

What did they borrow? _____

What is their monthly payment? _____

(b) How much interest will interest will they pay during their first year? _____

(c) Fill out the following table:

Month	Beg. Balance	Payment	Interest	Amt. to Principal	End Balance
60					
61					

(d) 10 years into the loan, the "family" decides it should refinance and get a better deal. They refinance the balance at 2% compounded monthly to be paid off in 15 years. (They're tough negotiators.) What is their new payment?

_____

(e) (Back to the original loan.) If the family pays $10,000 a month, how long would it take them to pay off his house? What would their final (partial) payment be?

It would take _____ years and _____ months.

Their last payment would be $_____