1. My credit card charges interest of 0.04% per day compounded daily. (a) What is the APR for this credit card? (b) What is the APY? Assume 360 days in a year (twelve 30-day months).

2. A local credit union is advertising a car loan with an APR of 6.75%. If interest is compounded monthly, (a) what is the interest rate per compounding period, and (b) what is the effective annual interest rate (i.e., the APY)?

3. Your local credit union is offering a 5.1% APR mortgage with monthly compounding (i.e., you pay them once a month). A regional bank nearby is offering a 5.0% APR mortgage with bi-monthly compounding (i.e., you pay them twice a month). Which is the cheaper mortgage?

4. You just received a bonus at work and you need to put it in a savings account until you figure out what you want to do with the money. The local bank offers an account that pays 3% per quarter compounded quarterly. The local credit union offers an account with a 12% APR and monthly compounding. A new online bank offers an account with an 11.9% APR and daily compounding. Which should you choose? (For simplicity, assume 360 days—12 months of 30 days each—for the year).

5. A credit card company charges its customers a 17.89% APR with continuous compounding. Calculate the APY using (a) the continuous compounding formula in the textbook, (b) the non-annual compounding formula in the FE Reference Handbook with m = 1000, and (c) the non-annual compounding formula in the FE Reference Handbook with m = 10,000.