

Task 4 (16 pts): A \$1000 deposit made into an account with 3% APR and left there for 1 year.

a) What is the account balance at the end of that year under each of the following scenarios?

i) annual compounding

ii) quarterly compounding

iii) monthly compounding

iv) daily compounding

v) continuous compounding

b) The APY, or annual percentage yield, is the actual percentage by which your balance grows each year. What is the APY for this account if interest is compounded:

i) monthly?

ii) continuously?

c) A bank offers a **savings account** (not a loan) with monthly compounding. Given your results above, do you think it will advertise the APR or the APY? Why? Find the web page of a bank and confirm your answer (the compounding does not have to be monthly; I am only interested in whether the APR or APY is given). Please include the exact URL where you found the information.