

Ex 1 You have a (currently empty) account into which you add a total of \$1200 per year. The account earns interest compounded continuously at a rate of 5%. How much will the account be worth at the end of 2 years if you....

(a) ...add in your money only once per year?

(b) ...add in your money twice per year?

(c) ...add in your money n times per year?

(d) ...add in your money continuously?

Ex 2 Beginning in the year 2010 and until 2040, GiantCo invests 10 million dollars per year (continuously) in treasury bonds that mature in 2040 and which pay 3.75% interest annually (compounded continuously). Find the future value of GiantCo's investment.

Ex 3 An 18-year-old is gifted with a sizable trust fund. Her benefactor chose the quantity to be equivalent to continuously investing \$50000, with the assumption that both trust fund and income would be accruing interest at a 6% annual rate compounded continuously, and that the two investments would be equal at age 50. How large is the trust fund?