

Compound Interest Review Problems

1. You make a deposit of \$1000 into an account paying 8% annual interest, compounded monthly. How much money is in the account after 9 years? (Ans.: \$2049.5302)
2. You open an account with \$500. The account pays 7.32% annual interest, compounded continuously. What is the balance after 140 months? (Ans.: \$1174.51209)
3. What rate of annual interest, compounded daily, would an account need to pay in order for \$5000 to grow to \$6000 in 6 years? (Ans.: 3.0388%)
4. What rate of annual interest, compounded continuously, would an account need to pay in order for \$123 to grow to \$321 in 10 years? (Ans.: 9.59256%)
5. The value of an account grew from \$400 to \$450 in six months. If the account pays interest compounded daily, what is its annual rate of interest? (Ans.: 23.564315%)
6. The value of an account grew from \$56 to \$140 in 2 years. If the account pays interest compounded continuously, what is its annual rate of interest? (Ans.: 45.814536%)
7. You want to endow your monthly breakfast at Julia's. It costs you \$20 (it's a big breakfast). How much money do you need to deposit in an account paying 2.4% annual interest, compounded continuously, to do this? (hint: you want to earn \$20 worth of interest each month). (Ans.: \$9990.00)
8. How long would it take \$10 to grow to \$100 in an account paying 2.5% annual interest, compounded quarterly? (Ans.: 92.3909 years)
9. How long would it take \$10 to grow to \$100 in an account paying 2.5% annual interest, compounded continuously? (Ans.: 92.1034 years)
10. The amount of money in a certain account doubles every 17 years. How long would it take \$500 in the account to increase in value to \$750 ? (Ans.: 9.94436 years)