

6.3 ~ Continuous – Non-Continuous - Linear

Write a function in the appropriate form: continuous or non-continuous exponential or linear.

Initial value = 1000

1. Increases by 5% each year.
2. Escalates at a continuous rate of 5%.
3. Grows by 20 units every 12 months.

Initial value = 520

4. Shrinks by 104 units every 365 days.
5. Lessens at a continuous rate of 20%.
6. Decreases by 20% annually.

Calculate the balance after four years and the effective rate (rounded to 3 decimal places).

Principle: \$800, nominal rate = 3.2%

7. Balance if compounded quarterly:
8. Balance if compounded continuously:
9. Effective rate, if compounded quarterly:
10. Effective rate, if compounded continuously:

Principle: \$12,500, nominal rate = 2.75%

11. Balance if compounded monthly:
12. Balance if compounded continuously:
13. Effective rate, if compounded monthly:
14. Effective rate, if compounded continuously: