1. A new truck is purchased for $22,000, and it will depreciate in value by 25% each year.
   a. What percentage of its value does it retain each year? 75%
   b. How much will the truck be worth 5 years from now? $5220.70

   \[ A(t) = P \cdot (1 - r)^t \]
   \[ A(5) = 22000 \cdot (1 - 0.25)^5 = 5220.70 \]

2. A local credit union offers a 5-year CD at 6% APR compounded monthly and a local bank offers a 5-year CD at 5.9% APR compounded continuously. If you invest $1000 in each, how much will each be worth in 5 years?

   **Credit union:**
   \[ A(t) = P \cdot \left(1 + \frac{r}{m}\right)^{mt} \]
   \[ A(5) = 1000 \cdot \left(1 + \frac{0.06}{12}\right)^{12\cdot5} = 1348.85 \]

   **Bank:**
   \[ A(t) = P \cdot e^{rt} \]
   \[ A(5) = 1000 \cdot e^{0.059\cdot5} = 1343.13 \]

   $1348.85 \quad $1343.13