

Chapter 7

Homework Assignment

1. You have a choice between depositing your \$100 into an account that earns 5% simple interest for 10 years or one that earns 4% compound interest for 10 years, which would you choose? What if you were depositing your \$100 for 25 years?
2. The fictitious country "Alpha" has a real GDP per person of \$1,000. What is the difference in Alpha's real GDP per person after 10 years if it has a 1% growth rate in real GDP per person versus 2%?
2. Given the following information for the fictitious country "Alpha," find (a) average labor productivity and (b) the share of the population that is employed.

Population = 30

employed workers = 20

real GDP = \$18,600

Key

1. \$100 deposited for 10 years at 5% simple interest would be worth $100 + 10(5) = \$150$. \$100 deposited for 10 years at 4% compound interest would be worth $100(1.04)^{10} = \$148.02$.

\$100 for 25 years at 5% simple interest would be worth $\$100 + 25(5) = \225 . \$100 deposited for 25 years at 4% compound interest would be worth $100(1.04)^{25} = \$266.58$.

2. $1000(1.02)^{10}$ versus $1000(1.02)^{10}$ which is \$1104.62 versus \$1218.99.

3.a. $\$18,600/20 = \930

a. $20/30 = .67$ or 67%