

NAME:

Period:

SCORE:

/

=

%=

---

---

**Sec 1**

**HW 5-3**  
**Growth**

**Unit 5**

---

---

1. From 1997 to 2002, the number  $n$  (in millions) of DVD players sold in the United States can be modeled by  $n = 0.42(2.47)^t$  where  $t$  is the number of years since 1997.

a) Identify the initial amount

b) Identify the growth factor

c) Identify the annual percent increase.

2. Each March from 1998 to 2003, a website recorded the number  $y$  of referrals it received from Internet search engines. The results can be modeled by  $y = 2500(1.50)^t$  where  $t$  is the number of years since 1998.

a) Identify the initial amount

b) Identify the growth factor

c) Identify the annual percent increase

3. The Work-Out Gym sold 550 memberships in 2001. Since then the number of memberships sold has increased 3% annually.

a) Write an explicit equation.

b) How many members will there be in 2020. (Round to the nearest whole number.)

4. The number of people who own computers has increased 23.2% annually since 1990. In 1990, half a million people owned a computer.

a) Write an explicit equation.

b) Predict how many people will own a computer in 2015. (Round to the nearest whole number.)

5. Cami purchased a rare coin from a dealer for \$300. The value of the coin increases 5% each year.

a) Write an explicit equation

b) How much will the coin be worth in 5 years? (Round to the nearest hundredth.)

6. Susan puts her \$2,000 she saved from her summer job into a savings account. The account earns 1.6% interest each year.

a) Write an explicit equation

b) How much money will she have in 13 years? (Round to the nearest hundredth.)

7. You are running a new city.

a. Choose a starting amount for the population in your new city.

b. Your city is growing by 300%. Write an explicit equation for your city.

c. Which of the following statements is true about your city?

**A.** Your city's population is doubling every year.

**B.** Your city's population is tripling every year.

**C.** Your city's population is quadrupling every year.