

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

The following formulas may help you answer #1-4.

$$A = p(1 + r)^t$$

$$A = p(1 - r)^t$$

$$A = p\left(1 + \frac{r}{n}\right)^{nt}$$

**DIRECTIONS:** For #1-4, use the given information to **answer the questions**. Show work and round answers to the nearest hundredth (or nearest cent). Write your answers in the provided blanks.

1. A house appreciates at a rate of 2.4% per year. How much will the house be worth in 15 years if it was purchased for \$81,000?

**\$115,607.06**

2. A car was purchased for \$24,000. After 6 years, the car was worth \$12,000. Find the annual rate of depreciation.

**About 10.91%**

$$A = p(1 + r)^t$$

$$A = p(1 - r)^t$$

$$A = p\left(1 + \frac{r}{n}\right)^{nt}$$

3. If you buy a tank for \$120,000 and it depreciates at a rate of 7% per year, when (in years) will its value be \$30,000?

**19.10 years**

4. If you invest \$12,000 in an account that earns 3.9% compounded monthly, how much will you have in 5 years?

**\$14,579.12**