

Unit 5 pg. 18 Odds

① a. $I = prt$
 $I = 500(.06)(5)$
 $I = 150$

b. $A = P(1 + \frac{r}{n})^{nt}$
 $A = 500(1 + \frac{.06}{1})^{1(5)}$

$A = 669.11$

c. $A = P(1 + \frac{.06}{4})^{4(5)}$

$A = 500(1 + .015)^{20}$

$A = 673.43$

d. $A = 500(1 + \frac{.06}{365})^{365(5)}$

$A = 674.91$

e. $A = Pe^{rt}$

$A = 500e^{(.06)(5)}$

$A = 674.93$

⑬ $A = Pe^{rt}$
 $1450 = 724e^{(.11)t}$

$\frac{1450}{724} = e^{.11t}$

$\ln \frac{1450}{724} = .11t$

$6.3 = t$

⑰ $A = P(1+r)^t$
 $A = 25000(1+.08)^5$
 $A = 36733.20$

③ $A = P(1 + \frac{r}{n})^{nt}$
 $A = 4000(1 + \frac{.062}{1})^{4(1)}$
 $4000(1.062)^4$
 $A = 5088.13$

⑤ a. $A = P(1 + \frac{r}{n})^{nt}$
 $A = 2000(1 + \frac{.06}{1})^{1(1)}$
 $2000(1.06)^1$
 2120

b. $A = 2000(1 + \frac{.06}{4})^{4(1)}$
 $= 2000(1.06)^2$
 $= 2247.20$

c. $A = 2000(1 + \frac{.06}{1})^{3(1)}$
 $2000(1.06)^3$
 $= 2382.03$

d. $A = 2000(1.06)^4$
 $= 2524.95$

e. $A = 2000(1.06)^5$

⑮ a. $A = P(1 + \frac{r}{n})^{nt} = 2676.45$

$2 = 1(1 + \frac{.07}{4})^{4t}$

$4t = \log(1 + \frac{.07}{4})^2$

$t = \frac{1}{4} \log(1 + \frac{.07}{4})^2$

$t = 9.99$

⑲ $A = P(1-r)^t$
 $A = 3000(1-.035)^6$
 $A = 2422704$

⑦ $A = P(1 + \frac{r}{n})^{nt}$
 $= 2.35(1 + \frac{.09}{1})^{8(1)}$
 $2.35(1.09)^8$
 4.68 trillion

⑨ $A = Pe^{rt}$
 $A = 23000e^{.072(7)}$
 $A = 38072.58$

⑩ $A = Pe^{rt}$
 $1000 = 500e^{r(1)}$
 $2 = e^{r(1)}$
 $\ln 2 = r$
 $r = \frac{1}{4} \ln 2$
 $r = .1733 \rightarrow 17.3\%$

b. $2 = 1(1 + \frac{.07}{365})^{365t}$

$365t = \log(1 + \frac{.07}{365})^2$

$t = \frac{1}{365} \log(1 + \frac{.07}{365})^2$

$t = 9.90$

c. $2 = 1e^{.07t}$
 $.07t = \ln 2$

$t = \frac{\ln 2}{.07}$

$t = 9.9$

$$\textcircled{21} \quad A = P(1+r)^t$$

$$A = 83000(1+.06)^5$$

$$A = 111072.72$$

$$\textcircled{23} \quad A = P(1-r)^t$$

$$A = 500(1-.10)^6$$

$$A = 265.72$$

$$\textcircled{25} \quad \text{a. } y = ab^x$$

$$y = .5(.5)^{\frac{5700}{5700}}$$

$$y = .25$$

$$\text{b. } y = .5(.5)^{\frac{11400}{5700}}$$

$$y = .125$$

$$\text{c. } y = .5(.5)^{\frac{22800}{5700}}$$

$$y = .03125$$

$$\textcircled{27} \quad y = ab^x$$

$$200 = 800(.5)^{\frac{x}{2}}$$

$$\frac{1}{4} (.5)^{\frac{x}{2}}$$

$$\log .5 \frac{1}{4} = \frac{x}{2}$$

$$x = 2 \log .5 \frac{1}{4}$$

$$x = 4$$