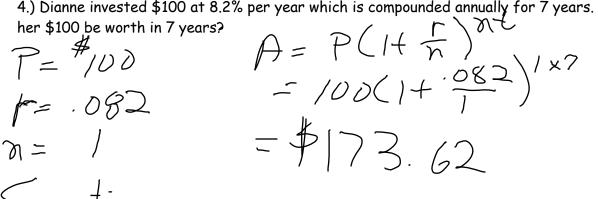
$\mathbf{A} = \mathbf{P} \left( \mathbf{1} + \frac{\mathbf{r}}{\mathbf{r}} \right)^{nt}$ Name A= the value of the loan or investment  $\mathbf{I} = \mathbf{A} - \mathbf{P}$ P = principalI = interestr = interest rate per period  $\rightarrow$  r = <u>% as decimal</u> n A = value of loan or investment n = number of interest periods per year P = principal(annually= 1, semi-annual = 2, monthly = 12, daily=365) t = total number of interest periods for the whole loan 1.) Evan invested \$52 400 at 6% per year compounded annually for 5 years. What is his total value on this investment?  $\Box = \Box \left( 1 + \frac{1}{\sqrt{2}} \right)^{-1}$  $A = P(1+\frac{r}{n})$ = 52,400 $= 57,400(1+\frac{06}{7})^{1\times5}$ - .06  $= \zeta_{2,400}(1.06)^{5} = 70,123.02$ 2.) Emily borrowed \$10 400 for 4 years at 12.7% per year and the interest is compounded semi-annually. What is the total she will pay back? 2 x4 - 10,400 (1+0.0635) 8 #\= .1/2 = 10,400 (J.6364) b.) How much interest did she pay? - 47018 97 l = A - P=17018.97-70400=6618.93 3.) Jason invested \$5 300 for 2 years. He earns 2.9% per year, and his interest is compounded monthly.  $A = P(1+\pi)nt$ What is his total value on this investment? P= 5300 = 5300(1+ .029)12x2 r = .029 $\mathcal{J} = 12$ 

= 5300(17 - 12)= 5300(1.05964) = #56/6.09

+=2

4.) Dianne invested \$100 at 8.2% per year which is compounded annually for 7 years. How much will her \$100 be worth in 7 years?



5.) Bill invested \$18 100 at 13.6% per year compounded guarterly for 7.5 years. How much will his h) ret investment be worth after this time?

$$P = \frac{4}{18,00} \quad A = P(H\pi)^{11} + \frac{136}{4} + \frac{136}{4}$$

$$r = .136 \quad = 18,100(1+\frac{136}{4})^{4\times2.5}$$

$$T = 4 \quad = 1800152.7265)$$

$$= \frac{4}{49350.86}$$

6.) Jennifer invested her allowance of \$270 which gets 15%/a compounded annually for 3 years. How much will she have in 3 years? ~~~~

$$P = \frac{1}{2} =$$

7.) You gave your friend a short term 2 year loan of \$43,000 at 3%/a compounded annually. How much in total will your friend end up paying you back? - 117000(1)1609

$$P = 43,000 \quad A = P(1+\pi)^{ML} = 43000(1.0001)$$

$$r = .03 \quad = 43000(1+\frac{.03}{.1})^{1+2} = 45618.70$$

$$h = 1 \quad = 43000(1+\frac{.03}{.1})^{1+2} = 45618.70$$

$$f = 2 \quad = 43000(1+\frac{.03}{.1})^{1+2} = 45618.70$$

$$f = 3000 \quad = 5000$$

$$f = 3000 \quad = 5000$$

$$f = 3000 \quad = 5000$$