

Answers

Compound Interest - Day #2

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

$$A = 6300 \left( 1 + \frac{0.016}{24} \right)^{24(6)}$$

$$A = 6300 (1.0006)^{144}$$

$$A = 6300 (1.100723856)$$

$$A = \$ \underline{6934.56}$$

2.  $A = 2500 \left( 1 + \frac{0.042}{2} \right)^{2(5)}$

$$A = 2500 (1.021)^{10}$$

$$A = 2500 (1.230998208)$$

$$A = \$ 3077.50$$

$$3077.50 - 2500 = \$ \underline{577.50}$$

$$A = 2500(1.230998208)$$

$$A = \$3077.50$$

$$3077.50 - 2500 = \underline{\underline{577.50}}$$

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

$$2000 = P \left(1 + \frac{0.062}{12}\right)^{12(2)}$$

$$2000 = P(1.0051\bar{6})^{24}$$

$$\frac{2000}{1.13165455} = \frac{P(1.13165455)}{1.13165455}$$

$$P = \underline{\underline{1767.32}}$$

$$4. \quad A = P \left( 1 + \frac{r}{n} \right)^{nt}$$

$$A = 3500 \left( 1 + \frac{0.005}{26} \right)^{(26)(6)}$$

$$A = 3500 (1.000192307)^{156}$$

$$A = 3500 (1.030451562)$$

$$A = \underline{\$3606.58}$$

$$5. \quad A = P \left( 1 + \frac{r}{n} \right)^{nt}$$

$$A = 5000 \left( 1 + \frac{0.075}{1} \right)^{(1)(10)}$$

$$A = 5000 (1.075)^{10}$$

$$A = 5000 (2.061031562)$$

$$A = \underline{10,305.16}$$

$$\textcircled{\$10,305.16}$$

$$A = 5000 (1.075)^{20}$$

$$A = 5000 (2.061031562)$$

$$A = \underline{10,305.16}$$

$$\text{\$} 10,305.16$$

$$6. \quad A = P \left( 1 + \frac{r}{n} \right)^{nt}$$

$$7500 = P \left( 1 + \frac{0.018}{52} \right)^{(52)(5)}$$

$$7500 = P (1.00346154)^{260}$$

$$7500 = P (1.094157244)$$

$$P = \underline{\text{\$} 6854.59}$$

$$7. \quad A = P \left( 1 + \frac{r}{n} \right)^{nt}$$

$$A = 4200 \left( 1 + \frac{0.0005}{365} \right)^{(365)(10)}$$

$$A = 4200 (1.00000137)^{3650}$$

$$A = 4200 (1.005012517)$$

$$A = \underline{4221.05}$$

$$8. \quad A = P \left( 1 + \frac{r}{n} \right)^{nt}$$

$$A = 6400 \left( 1 + \frac{0.062}{2} \right)^{(2)(5)}$$

$$A = 6400 (1.031)^{10}$$

$$A = 6400 (1.357021264)$$

$$A = \underline{\$8684.94}$$

$$8684.94 - 6400 = \underline{\$2284.94}$$