

## KUTA ODPS

①  $A(x) = \underline{\hspace{2cm}}$

$P = 4848$

$r\% = 5\% \quad r = 0.05$

$n = 2$

$t = x = 6$

$$A = P \left(1 + \frac{r}{n}\right)^{2x}$$

$$A = 4848 \left(1 + \frac{0.05}{2}\right)^{2x}$$

model

$$A(6) = 6520.02$$

↑  
Balance

$$\text{Model } \$1672.02$$

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③  $A(x) = \underline{\hspace{2cm}}$

$P = 2658$

$r\% = 9\% \quad r = 0.09$

cts compounded interest

$t = x = 15 \text{ years}$

$$A = Pe^{rx}$$

model

$$A = 2658 e^{0.09x}$$

$$A(15) = 2658 e^{(0.09)(15)}$$
$$= \$10253.04$$

balance →

$$\text{Model } \$7595.04$$

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$$\textcircled{5} \quad A(10) = 12\,855.94$$

$$P = ?$$

$$r\% = 4.3\%$$

$$r = 0.0431$$

$$t = x = 10$$

$$n = 12$$

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

$$12\,855.94 = P \left(1 + \frac{0.0431}{12}\right)^{12 \cdot 10}$$

$$12\,855.94 = P \left(1 + \frac{0.0431}{12}\right)^{120}$$

$$P = \frac{12\,855.94}{\left(1 + \frac{0.0431}{12}\right)^{120}}$$

$$P = 8361.00$$

$$\textcircled{7} \quad A(15) = 1912.41$$

$$P = ?$$

$$r\% = 2.63\%$$

$$r = 0.0263$$

$$n = \text{cts compounded}$$

$$t = x = 15$$

$$1912.41 = P e^{(0.0263)(15)}$$

$$P = \frac{1912.41}{e^{0.3945}}$$

$$P = 1289.00$$

$$\textcircled{9} \quad A(17) = 8624.97$$

$$P = 6139$$

$$r = ?$$

$$t = x = 17$$

$n = \text{cts compounded}$

$$8624.97 = 6139e^{17r}$$

$$\frac{8624.97}{6139} = e^{17r}$$

$$\ln\left(\frac{8624.97}{6139}\right) = \ln e^{17r}$$

$$\ln\left(\frac{8624.97}{6139}\right) = 17r$$

$$r = \frac{\ln\left(\frac{8624.97}{6139}\right)}{17}$$

$$r \approx 0.019999978$$

$$r \approx 0.02$$

$$\boxed{r\% = 2\%}$$

$$\checkmark \checkmark \quad A = 6139 (e^{0.02(17)})$$

$$= 8624.97$$