1A Answers

① $\frac{10200}{10000} = 1.02$ in 1 mo. $(1.02)^{12} = 1.268242$

26.8% eff. ann.

② $\frac{3500}{3000} = 1.1667$ in 3 yrs $(1.1667)^{1/3} = 1.0527$

5.27% eff. ann.

③ $[(1.03)(1.02)(1.04)]^{1/3} = 1.029968$

2.9968 %

④ $(1.04)^2 = 1.0816$ 8.16 %

⑤ $(1.05)^4 = 1.455$ 21.55 %

⑥ $(1.01)^{12} = 1.126825$ 12.68 %

(7) $\$300(1.1)^{10} = 778.1227$

(8) $600(1.06)^{-8} = 396.4474$

(9) $4000\left(1+.07\left(\frac{60}{365}\right)\right) = 4046.027$

(10) $X = 3000(1.07)^{-3} + 5000(1.07)^{-4}$

$= 6263.37$

(11) $\left(1+\frac{.07}{2}\right)^{2} = 1.071225$

(12) $\left(1+\frac{.07}{12}\right)^{12} = 1.07229$

(13) $\left(1+\frac{i^{(4)}}{4}\right)^{4} = \left(1+\frac{.06}{2}\right)^{2} = 1.0609$

$i^{(4)} = \left[(1.0609)^{1/4} - 1\right] \cdot 4$

$= .05955\,66$

5.956 % Conv. quarterly.

(14) $\left(1+\frac{i^{(4)}}{4}\right)^4 = 1.06$

$i^{(4)} = \left[1.06^{1/4} - 1\right] 4$

$= .058695$

5.870 % Conv. quarterly

(15) $\left(1+\frac{.1}{12}\right)^{12} = 1.104713$

↑ try 2, 4, 6, ...

Compounded monthly

(16) $e^{.09} = 1.094174$

(17) $e^x = 1.12$

$x = \ln(1+i) = \ln(1.12) = .1133$

11.33 %

(18) $300\left(1+\frac{.1}{2}\right)^{2\cdot 10} = 795.9893$

(19) $1000\left(1+\frac{.08}{4}\right)^{4\cdot 4} = 1372.786$

(20) $600\left(1+\frac{.06}{12}\right)^{12\cdot(-8)} = 371.7143$