

These are alleged answers. For each error herein, you get extra-credit points for being the first to report it by e-mail.

1 $2500(1.045)^{20} \approx \6029.29

2 $20000(1.045)^{-60} \approx \1425.78

3 $\sum_{k=0}^{19} 100(1.045)^k = 100 \cdot \sum_{k=0}^{19} (1.045)^k = 100 \cdot \frac{1.045^{20} - 1}{1.045 - 1} = 100 \cdot \frac{1.045^{20} - 1}{0.045} \approx$
\$3137.14

4 $\sum_{k=0}^{19} 100(1.045^4)^k = 100 \cdot \sum_{k=0}^{19} (1.045^4)^k = 100 \cdot \frac{1.045^{4 \cdot 20} - 1}{1.045^4 - 1} \approx \$17,052.95$

5 $\sum_{k=0}^{99} 250 \cdot 1.045^{-k} = 250 \cdot \sum_{k=0}^{99} 1.045^{-k} = 250 \cdot \frac{1.045^{-100} - 1}{1.045^{-1} - 1} \approx \5734.40