

$$A = P(1+r)^n \quad \text{no. 1}$$

$$= 5500(1+0.03)^{15}$$

$$5500(1.03)^{15}$$

$$A = 5749.35$$

$$I_{\text{interest}} = 5749.35 - 5500$$

$$= 249.35$$

no. 2

$$P = \frac{PMT}{r} \left[ \frac{1 - (1+r)^{-n}}{r} \right]$$

$$= 6000 \left[ \frac{1 - (1 + \frac{0.02}{2})^{-10 \times 2}}{0.02} \right]$$

$$= 54136.66$$

no. 3

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

$$= 550 \left( \frac{(1 + \frac{0.2}{2})^{36} - 1}{0.2} \right)$$

$$= 550 \left( \frac{(1.1)^{36} - 1}{0.2} \right)$$

$$= 8225.99$$

$$= 8226$$

no. 4

$$FVA = \frac{PMT (1+r)^n - 1}{r}$$

$$750,000 = \frac{PMT \left( \frac{1+0.08}{2} \right)^{60} - 1}{0.08}$$

$$PMT = \frac{750,000}{118.9953426}$$

$$= 6302.77$$