

Solution:

(1)

$$(a) \text{ Amount} = \$ 10,000(1.08)^4 = \$1,360.48$$

$$(b) \text{ Amount} = \$ 10,000(1.12)^4 = \$1,573.51$$

(2)

$$(a) \text{ Amount} = \$ \frac{10,000}{(1.08)^4} = \$7,352.94$$

$$(b) \text{ Amount} = \$ \frac{10,000}{(1.12)^4} = \$6,355.22$$

(3)

$$(a) \text{ Annual} = \$ \frac{10,000}{(1.08)^4} = \$7,352.94, \text{ Semi annual} = \$ \frac{10,000}{(1.08)^8} = \$5,405.40$$

$$(b) \text{ Annual} = \$ \frac{10,000}{(1.12)^4} = \$6,355.22, \text{ Semi annual} = \$ \frac{10,000}{(1.12)^8} = \$4,038.94$$