Solution:

(1)

The amount that needs to be paid is given by:

$$Amount\ to\ be\ paid = \$50{,}000\ (1 + 0.16)^6 = \$121{,}819.82$$

(2)

Same as (1)

(3)

The amount needed to be paid per would be given by x. Then, we get

$$\$50{,}000 = \frac{x}{0.16}\left(1 - \frac{1}{1.16^6}\right) \implies x = \$13{,}569.49$$