$$S = \frac{\frac{1}{(1.08)^4} - \frac{1}{(1.08)^{10}}}{1 - \frac{1}{1.08}}$$

So $P = \frac{18{,}000}{S} = \$4904.91$

Ballpark Figures: More than $\frac{18{,}000}{6} = 3000$ Less than $\frac{18000(1.08)^9}{6} = 5997.01$

Your annual payments are $\$4904.91$.

4. $200{,}000 \underbrace{\quad}_{1\text{ month}} E\ F\ F\ F\ \cdots\ F$

$$200{,}000 = \frac{E}{(1.02)} + \frac{E}{(1.01)^2} + \cdots + \frac{E}{(1.01)^{180}}$$

$$200{,}000 = F\left[\frac{1}{1.01} + \cdots + \frac{1}{(1.01)^{180}}\right]$$

$$200{,}000 = F\left[\frac{\frac{1}{1.01} - \frac{1}{(1.01)^{181}}}{1 - \frac{1}{1.01}}\right]$$

$$F = 200{,}000 \cdot \left[\frac{1 - (1.01)^{-1}}{(1.01)^{-1} - (1.01)^{181}}\right] \approx 2400.34$$

Ballpark: $\frac{200{,}000}{180} = 1111.11$ $\frac{200{,}000(1.01)^{180}}{180} = 6662.01$

The price pays $\$2400.34$ per month.