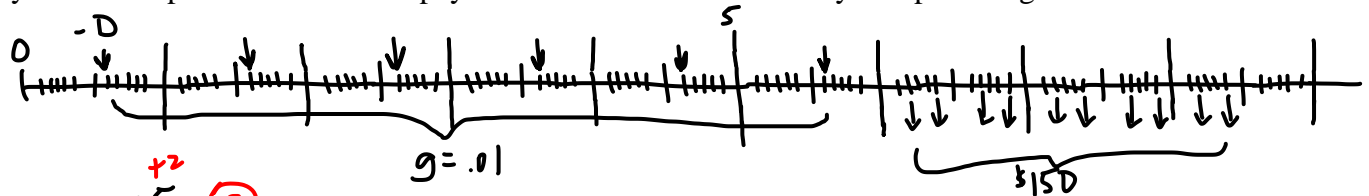


Assume you plan to make the first of a series of annual deposits into an account seven months from today. Your deposits will grow by 1% each through your final deposit five years and seven months from today. You plan to make the first \$150 quarterly withdrawal from the account six years and two months from today. Your plan to make your final \$150 withdrawal (all withdrawals are \$150) eight years and five months from today. How large do you need to make your first deposit if the account pays an APR of 5% with monthly compounding?



$$+7 \quad r\left(\frac{1}{12}\right) = \frac{.05}{12} \quad (13)$$

$$+3 \quad r(1) = \left(1 + r\left(\frac{1}{12}\right)\right)^{12} - 1 \quad (7)$$

$$+3 \quad r\left(\frac{1}{4}\right) = \left(1 + r\left(\frac{1}{12}\right)\right)^3 - 1 \quad (7)$$

$$+7 \quad PV_{5\text{yrs}, 11\text{mo}} = \left(\frac{150}{r\left(\frac{1}{4}\right)}\right) \left(1 - \left(\frac{1}{1+r\left(\frac{1}{4}\right)}\right)^{10}\right) = A \quad (15)$$

$$+7 \quad PV_{5\text{yrs}, 7\text{mo}} = A \left(\frac{1}{1+r\left(\frac{1}{12}\right)}\right)^4 = B \quad (13)$$

$$+7 \quad FV_{5\text{yrs}, 7\text{mo}} = \left(\frac{C}{r(1) - .01}\right) \left(\left(1 + r(1)\right)^6 - (1.01)^6\right) = D \quad (15)$$

⇒ set B = D & solve for C . +5