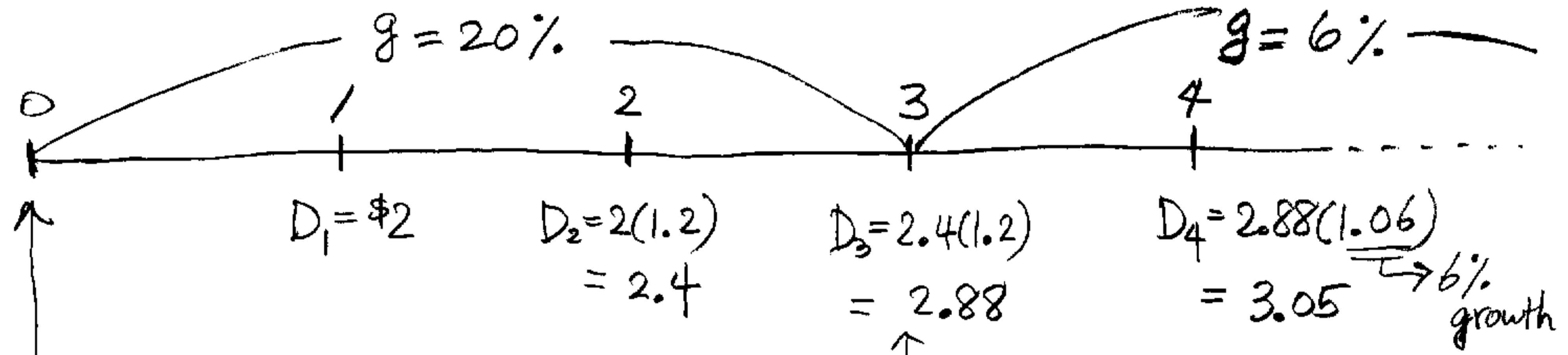


② Non-constant Growth Model

→ assumes that the dividend growth rate changes over time.

Ex) A firm is expected to pay \$2 dividend per share next year. The required rate of return is 10%. The dividend growth is expected to be a constant rate of 20% for 3 years and thereafter, decline to a 6% constant rate. Find the stock price today.



Step 1: Find the stock price in year 3.
↳ the growth rate changes in year 3.

$$P_3 = \frac{D_4}{r-g} \quad \left(\text{from the general formula, } P_N = \frac{D_{N+1}}{r-g} \right)$$

$$= \frac{3.05}{.1 - .06}$$

$$= 76.25$$

Step 2: P_0 (stock price today) =

$$\frac{D_1}{(1+r)} + \frac{D_2}{(1+r)^2} + \frac{D_3 + P_3}{(1+r)^3}$$

$$= \frac{2}{1.1} + \frac{2.4}{1.1^2} + \frac{2.88 + 76.25}{1.1^3}$$

$$= 1.82 + 1.98 + 59.45$$

$$= \$63.25$$