Answer on Question #42114, Economics, Finance

Cash flows of $20 million for 4 years.
Investment = $48 million.
Tax rate = 40%.
Debt ratio = 45%.
Bonds have 5 years left to maturity, a coupon rate = 7% annually coupons, face value = $1000, current price = $960.
$6,000,000 in preferred stock (dividend of $4 with a price of $42, issue cost = $2), the rest from retained earnings.
$2.5 per share next year, retention rate = 40%, return on equity = 25%. Current stock price = $50.

$$WACC = E/V * Re + D/V * Rd * (1-Tc)$$

Re = cost of equity
RD = cost of debt
E = market value of the firm's equity
D = market value of the firm's debt
V = E + D
E/V = percentage of financing, i.e., equity
D/V = percentage of financing, i.e.debt
TC = corporate tax rate

WACC = 0.45*0.25 + 0.45*0.4*(1-0.4) = 0.2205

Net Present Value (NPV)

$$NPV = \sum_{t=1}^{T} \frac{\text{Cash Flow}_t}{(1+i)^t} - \text{Initial Cash Investment}$$

t = Cash Flow Period
i = Interest Rate Assumption

NPV = 20000000/1.2205 + 20000000/1.2205^2 + 20000000/1.2205^3 + 20000000/1.2205^4 - 48000000 = $1826771,24