

Lessons 27–29: Time Value of Money — PV, FV, and Annuities

Part A: Future Value and Present Value

Use the formulas: $FV = PV \times (1+r)^n$ | $PV = FV \div (1+r)^n$

#	Problem	Formula Used	Answer (\$)
1	FV of \$5,000 at 8% for 3 years		
2	PV of \$10,000 received in 5 years at 6%		
3	FV of \$2,000 at 5% for 4 years		

Part B: Annuity Calculations

An annuity pays \$3,000 per year for 4 years. Discount rate = 8%. PV annuity factor = 3.312.

- Present Value of this annuity = $\$3,000 \times 3.312 = \$$ _____
- If you receive \$3,000/year for 4 years starting NOW (annuity due), multiply the above by (1.08) = \$_____

Part C: Short Answer

Why is \$1,000 received today worth more than \$1,000 received in 3 years? List two reasons.

Part D: Real-World Application

You are offered a lump-sum payment of \$20,000 today OR \$5,500 per year for 5 years. If your discount rate is 8% (PV annuity factor = 3.993), which option is worth more?
