

ACC421

Compute the present value of each of the following periodic amounts.
Each amount is paid/received at the end of each period.

A: \$15,000 received at the end of each period for 9 periods compounded at 8%.

$$= \$15,000 \times \frac{1 - \frac{1}{(1.08)^9}}{0.08} = \$93,703.30$$

Present Value = \$93,703.30.

B: \$40,000 paid at the end of each period for 7 periods compounded at 4%.

$$= \$40,000 \times \frac{1 - \frac{1}{(1.04)^7}}{0.04} = \$240,082$$

Present Value = \$240,082.

C: \$15,000 paid at the end of the tenth, eleventh, twelfth, and thirteenth periods compounded at 11%

$$= \frac{\$0}{(1.11)^1} + \frac{\$0}{(1.11)^2} + \dots + \frac{\$15,000}{(1.11)^{10}} + \frac{\$15,000}{(1.11)^{11}} + \frac{\$15,000}{(1.11)^{12}} + \frac{\$15,000}{(1.11)^{13}} = \$18,192.30$$

Present Value = \$18,192.30

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Compute the requested item for each of the following:

A: A bank account has a current balance of \$408,029. If the money is left in the account and earns 9% compounded annually, how many years will it take for the balance to grow to \$1,620,000?

PV	(\$408,029)
Rate	9%
FV	\$1,620,000
Periods	16

Using the NPER function in excel

It will take 16 years for the balance to grow to \$1,620,000.

B: A bank account has a current balance of \$174,439. If the money is left in the account for 25 years and grows to \$1,890,000, what is the annual rate of interest compounded annually?

PV	(\$174,439)
Periods	25
FV	\$1,890,000
Rate	10%

Using excel RATE function

The annual rate of interest compounded annually is 10%.

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VPJ Company
Comparative Balance Sheet
As of December 31, 2013 and 2012

For the year

	2013	2012
Cash	\$61,400	\$39,200
Receivables	\$59,800	\$44,400
Inventory	\$54,600	\$64,800
Plant Assets	\$64,800	\$58,000
Accumulated Depreciation	(\$41,000)	(\$39,900)
Long-term Investments (Held-to-maturity)	\$44,400	\$48,500
Total Assets	\$244,000	\$215,000
Liabilities & Stockholders' Equity		
Accounts Payable	\$41,000	\$30,800
Accrued Liabilities	\$6,800	\$8,500
Bonds Payable	\$47,800	\$52,900
Capital Stock	\$64,800	\$58,000
Retained Earnings	\$83,600	\$64,800
Total Liabilities & Stockholders' Equity	\$244,000	\$215,000

Cash Flows

Net Income
Adjustment
Depreciation
Gain on Sale
Decrease in
Increase in
Increase in
Decrease in
Net cash pr

VPJ Company
Income Statement

For the Year Ended December 31, 2013

Sales	\$235,500
Cost of Goods Sold	\$160,400
Gross Margin	\$75,100
Selling & Administrative Expenses	\$31,700
Income from Operations	\$43,400
Gain on Sale of Investments	\$2,700

Cash Flow

Sale of Held
Purchase of
Net cash pr

Cash flows

Issuance of
Retirement
Payment of
Net cash pr
Net increas