

Effective Annual Interest Rate on Short-Term Loans Practice Problem

XYZ Assisted Living Center can borrow \$150,000 for one year at 7.5 percent. Calculate the amount of interest the center will pay.

Effective Annual Interest Rate on Short-Term Loans Practice Problem Solution

$$7.5\% = \frac{I}{\$150,000}$$

$$I = 7.5\% \times \$150,000$$

$$I = \$11,250$$

Effective Annual Interest Rate on Trade Credit Practice Problem Solution

On day 45

Step 1: Annual interest paid = $\frac{365}{35} = 10.43 \times \$2 = \$20.86$

Step 2: Amount borrowed each time = \$98

Step 3: Annual interest rate = $\frac{\text{Annual interest paid}}{\text{Amount borrowed each time}} = \frac{\$20.86}{\$98.00} = 21.3\%$

On day 30

Step 1: Annual interest paid = $\frac{365}{20} = 18.25 \times \$2 = \$36.50$

Step 2: Amount borrowed each time = \$98

Step 3: Annual interest rate = $\frac{\text{Annual interest paid}}{\text{Amount borrowed each time}} = \frac{\$36.50}{\$98.00} = 37.2\%$

On day 11

Step 1: Annual interest paid = $\frac{365}{1} = 365 \times \$2 = \$730$

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Step 3: Annual interest rate = $\frac{\text{Annual interest paid}}{\text{Amount borrowed each time}} = \frac{\$730}{\$98} = 744.89\%$

XYZ Sleep Disorder Clinic invests \$106,944 for five years to retire a debt. Assuming the clinic can invest at 7 percent compounded annually, how much is the debt XYZ needs to retire?

*Future Value Practice Problem
Solution*

$$FV = PV(1 + i)^n$$

$$FV = \$106,944(1 + .07)^5$$

$$FV = \$149,994.49$$

HB 10BII solution, compounded annually

Keys	Display	Description
1  (P/YR)	1.00	Sets compounding periods per year to 1
5 (N)	5.00	Stores the number of compounding periods (1 x 5)
7 (I/YR)	7.00	Stores the interest rate
-106,944 (PV)	-106,944	Stores the present value
(FV)	\$149,994.49	Calculates the future value



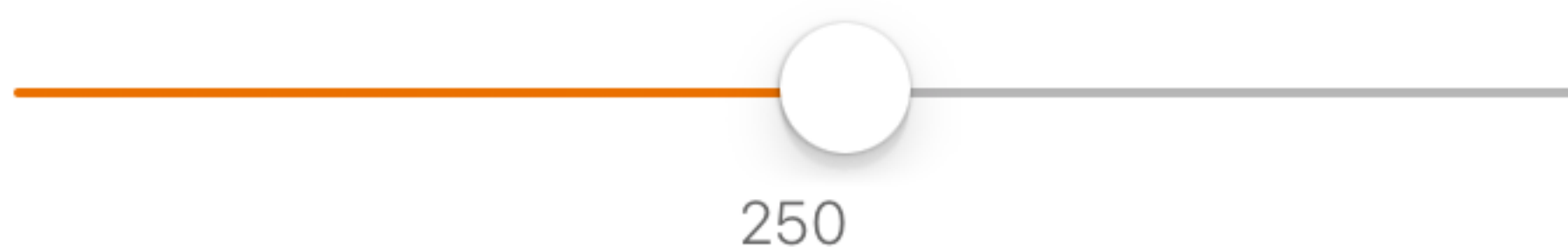
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