Name_____

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QUIZ 1

Show all work. Label and clearly explain your answer. *This is very important.* 1) You must explain how you arrived at your answer in order to get full credit. 2) If you do show your work, and your answer is wrong, you can still earn a substantial amount of credit depending on how serious the error is. 3) If your answer is wrong, and you don't show your work, you will get a zero.

a. Calculate the present value of a series of cash flows of $12 per year, starting next year, and ending in 5 years. The annual interest rate is 4%.

b. Calculate the present value of a series of cash flows of $12 per year, starting next year, and ending in 25 years. The annual interest rate is 4%.

c. Calculate the present value of a series of cash flows of $12 per year, starting next year, and ending in 125 years. The annual interest rate is 4%.

d. Calculate the present value of a series of cash flows of $12 per year, starting next year, and continuing forever. The annual interest rate is 4%.

a. $PV = \frac{c}{k}\left(1-\frac{1}{(1+k)^n}\right) = \frac{12}{0.04}\left(1-\frac{1}{(1.04)^5}\right) = 53.42$

b. $PV = \frac{c}{k}\left(1-\frac{1}{(1+k)^n}\right) = \frac{12}{0.04}\left(1-\frac{1}{(1.04)^{25}}\right) = 187.46$

c. $PV = \frac{c}{k}\left(1-\frac{1}{(1+k)^n}\right) = \frac{12}{0.04}\left(1-\frac{1}{(1.04)^{125}}\right) = 297.77$

d. $PV = \frac{c}{k} = 300$