**Topic 5 Knowledge Check**

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| Points: | 24 |

Started on Jul 04 at 00:00

Your Submission:

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1. Bookmark question for later

Which one of the following is NOT a characteristic of ordinary annuities?

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| * + Payments are equally spaced.   + Payments are made at the beginning of each period.   + Payments are of equal amounts.   + All are characteristics of ordinary annuities. |
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1. Bookmark question for later

Which one of the following is NOT a characteristic of annuities due?

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| * + Payments are of equal amounts.   + Payments are equally spaced.   + All are characteristics of annuities due.   + Payments are made at the beginning of each period. |
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1. Bookmark question for later

Perpetuities are different from ordinary annuities in that perpetuities:

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| * + Do not have equal dollar amount payments.   + Pay at the beginning of each period.   + Pay an infinite number of payments.   + Do not have equally spaced cash flows. |
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1. Bookmark question for later

You decided to invest $2,000 a year for next ten years starting one year from today. If you make the annual contribution into an account paying 5%, how much will you have in 10 years? (round to nearest $1)

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| * + $27,156   + $26,414   + $25,156   + $25,500 |
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1. Bookmark question for later

What is the future value of an ordinary annuity with payments of $500 for 3 years if the discount rate is 10%?

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| * + $1,820.55   + $1,367.77   + $1,655.00   + $1,243.43 |
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1. Bookmark question for later

You are considering buying a security that will pay $1,000 every year forever.  If you buy the asset, you will start receiving the first $1,000 payment immediately (today). If the discount rate is 5%, what is the most you should be willing to pay for this security?

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| * + $20,000   + $22,000   + $21,000   + $19,000 |
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1. Bookmark question for later

You are starting a four-year educational program today. Since you did not save enough money, you plan to take a loan of $10,000 each year for four years. The loan has an interest rate of 4.5% and you are taking the first $10,000 installment today. You plan to finish your education in exactly four years. What will be the balance owing on your loan when you graduate? (Round to the nearest $1)

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| * + $41,800   + $40,000   + $42,782   + $44,707 |
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1. Bookmark question for later

Your Mom is asking you for help with her retirement planning. She and your Dad are hoping to start withdrawing from their retirement accounting beginning in one year from today, and they want to make sure that they have enough in the account to make annual withdrawals of $60,000 for 20 years. Their retirement account pays 8% annually. How much do they have to have now in the account? (Round to the nearest $1)

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| * + $636,216   + $589,089   + $600,000   + $622,313 |
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1. Bookmark question for later

You just graduated from a university and have some student loan debt. The interest rate on your loan is 4%.  If you make monthly payments of $504.54 for 10 years at the beginning of each month (starting today) your debt will be completely repaid. The amount you owe today is closest to which of the following?  (Round to the nearest $1)

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| * + $50,000   + $49,107   + $49,834   + $60,545 |
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1. Bookmark question for later

You are planning for retirement and need $4,000,000 when you retire in exactly 40 years. Your employer will match all contributions to your retirement account on 1-for-1 basis and you can earn 8% on all invested funds. Currently, you have $10,000 in your retirement account.  To reach your goal, you plan to make monthly contributions starting today.  How much do you have to contribute to your retirement account each month? (Use at least four decimal places of accuracy for the interest rate and round to the nearest $1)

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| * + $538.13   + $1,069.14   + $1,076.27   + $534.57 |
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1. Bookmark question for later

Suppose you turned 25 today and got married to your dream spouse (what a day!). You receive a wedding gift of $5,000.  In consultation with your new spouse, you decide to put the money in an account that is earning 8% so that you can travel around the world when you retire at the age of 65. How much will you have in your account in 40 years? (allow $1 rounding)

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| * + $108,623   + $21,000   + $117,312   + $100,576 |
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1. Bookmark question for later

You have a son who just turned 8 years old. You want him to go to a university and would like to provide financial support. Your goal is to give him a gift of $15,000 when he enters college in exactly 10 years. Assuming you can earn 5%, how much do you have to set aside today? (round to the nearest $1)

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| * + $7,500   + $15,000   + $24,433   + $9,209 |
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1. Bookmark question for later

Which of the following gives the largest effective rate?

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| * + 18.6% APR compounded daily   + 18.7% APR compounded monthly   + 20.4% APR compounded annually   + 19.0% APR compounded quarterly |
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1. Bookmark question for later

Your grandparents set-up a family education fund that pays $5,000 every quarter in perpetuity to fund family educational pursuits. The fund earns 12%. How much did your grandparents set aside to establish the fund? Assume that the fund started making distributions 3 months after establishment.

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| * + $41,667   + $46,667   + $125,000   + $166,667 |
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1. Bookmark question for later

You just purchased a new car that cost $20,000 with all taxes and fees. You are making a down payment of $5,000 and can afford $200 payments each month starting one month from today. If the APR of the loan is 3%, how many months will it take to repay the loan? (round to nearest month)

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| * + 75 months   + 84 months   + 78 months   + 83 months |
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1. Bookmark question for later

What is the present value of a stream of cash flows of $125,000 at a discount rate of 7%?

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| * + 1,785,714   + 1,552,667   + 875,000   + 1,250,000 |
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1. Bookmark question for later

What is the discount rate of a stream of cash flows of 50,000 that have a present value of 450,000?

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| * + .11   + .75   + .12   + .10 |
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1. Bookmark question for later

What is the cash flow stream for a present value 1,000,000 at 5% paid in equal installments in the future?

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| * + 20,000   + 35,000   + 50,000   + 500,000 |
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1. Bookmark question for later

A woman has just found out that a rich great-aunt has bequeathed a trust fund that pays $50,000 to her and to her descendants forever. If the trust fund earns 3.5% interest, what is the amount of the trust fund?

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| * + 2,529,123   + 5,000,000   + 1,428,571   + 1,782,425 |
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1. Bookmark question for later

A couple wants to save up for a down payment on a house. They think they need to save $100,000 in five years. If the interest rate is 4% and they start at the end of the year when they both get bonuses from their employers, how much do they have to put aside annually?

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| * + 18,462.71   + 22,096.37   + 15,962.84   + 17,752.61 |
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1. Bookmark question for later

A person wants to put aside $500 at the beginning of each month for 10 years. If she estimates an interest rate of 5.5%, how much will she have in her savings account at the end of the 10 years?

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| * + 80,118.33   + 70,154.99   + 86,437.68   + 76,905.66 |
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1. Bookmark question for later

A mother wants to contribute to her child's higher education fund. She wishes to have $15,000 available each year for six years. Her child starts college in 15 years and she can save 6% before school starts if she puts her end-of-year bonus into a trust fund and figures that the fund will earn 4% after her child begins her college education. How much does she have to put aside annually if the money is withdrawn for college at the beginning of each year attending college?

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| * + 3,346.19   + 5,802.74   + 3,513.38   + 4,159.87 |
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1. Bookmark question for later

A couple has $25,000 in their retirement savings today. How many years do they have to save at 6%, putting in $1,000 at the beginning of each year, to reach $80,000?

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| * + 34.8   + 22.2   + 20.0   + 14.2 |
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1. Bookmark question for later

A man has just inherited $250,000. If he invests the money at 4.5%, how much can he expect to have at the end of 15 years when he retires?

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| * + 483,820.61   + 519,732.04   + 477,862.41   + 120,254.27 |
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