

K/U	Application	Thinking	Comm
/3	/9	/9	/2

$A = P(1 + i)^n$	$PV = FV(1 + i)^{-n}$	$FV = R \frac{[(1+i)^n - 1]}{i}$	$PV = R \frac{[1 - (1+i)^{-n}]}{i}$
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1. Determine the future value of an investment of \$500 earning an annual interest rate of 2.5% compounded daily for 10 years.

/3 K

2. Morgan decides to invest some money so that she can have \$10 000 for a down payment on a new car in 5 years. She is considering two investments options:
 Account A pays 3.5% per annum, compounded semi-annually
 Account B pays 3.2% per annum, compounded monthly.
- a) Predict which account is a better choice for Morgan and explain your reasoning.
 (NO CALCULATIONS HERE)

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b) Determine which account is the better choice for Morgan. Show all calculations.

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3. A certain bank is offering an annual interest rate of 4% compounded monthly.

Tevye is planning for his retirement. One option is to invest a lump sum of \$3000 in five years and add another lump sum of \$4000 five years later.

Instead of that, he could make regular monthly payments that will result in the same balance ten years from now.

a) Determine the monthly payment that Tevye would need to make.

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b) Tevye's friend, Avram suggested that he go with the first option because then he doesn't have to spend any money for the first five years.

Do you agree with this advice? Justify your answer.

/2 C

4. Farshad's grandparents plan to set up an annuity to help him when he moves into an apartment to attend university. Farshad will be able to withdraw \$300 at the end of each month for 4 years. The first withdrawal will be made one month from now when Farshad begins university.

- a) If the annuity earns 5.4% interest, compounded monthly, how much should Farshad's grandparents invest now to finance the annuity?

/3 App

- b) How many of the \$300 payments are actually covered by the interest earned on the annuity.

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