

## Chapter 10 Tech It! Planning Form



### Who Wants to Be a Millionaire?

#### Read the following:

Financial calculators are powerful tools to quickly calculate the growth of your investments over extended periods of time and at different annual rates.

For this activity, you will use free online calculators to figure out how to become a millionaire. You will experiment with different savings amounts and different growth rates for your money. A regular savings account in a bank is not going to give you the growth rate over time that you will need to grow your money to millionaire status, but you can make assumptions based on various investment growth rates provided.

#### Instructions

1. Research your dream job. Look up the average annual starting salary for that job.
2. Using an online calculator of your choice, complete the table on the following page for each of the options provided. Determine how much money you would have saved under each of the Average Investment Growth Rate columns.
3. Answer the questions on page 3.

**Be sure to use the following guidelines when using the various online calculators, as they don't all look the same:**

- ☐ Some sites default to a fixed investment each year, so include "Future Value of a Growing Annuity" in your search when you want to increase your investment each year.
- ☐ Annual compounding (one time each year) should be selected and one payment per year.
- ☐ Understand whether your calculator is investing the money at the beginning or end of each year; results will vary based on that assumption.

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Use the sample table below as a guide as you complete this project.

	Dream job: Electrical Engineer				
	Average starting salary \$61,420				
			Average Investment Growth Rate		
	Savings option	TVM formula	4%	8%	12%
<b>Option 1</b>	Saving \$2,000 per year Fixed over 35 years Invested at the end of the year	Future Value of an Annuity	\$147,304.45	\$344,633.61	\$863,326.99
<b>Option 2</b>	Saving \$2,000 per year for 35 years Increasing savings by 3% per year Invested at the end of the year	Future Value of an Annuity - growing	\$226,445.31	\$478,859.27	\$1,110,794.60
<b>Option 3</b>	Saving 10% of income per year for 35 years Increasing savings by 3% per year Invested at the end of the year	Future Value of an Annuity - growing	\$695,413.54	\$1,470,586.83	\$3,411,250.33

### Your turn

	Dream job:				
	Average starting salary \$				
			Average Investment Growth Rate		
	Savings option	TVM formula	4%	8%	12%
<b>Option 1</b>	Saving <b>\$2,200</b> per year Fixed over 35 years Invested at the end of the year	Future Value of an Annuity			
<b>Option 2</b>	Saving <b>\$2,200</b> per year; 35 years Increasing savings by 3% per year Invested at the end of the year	Future Value of an Annuity - growing			
<b>Option 3</b>	Saving 10% of <b>income</b> per year for 35 years Increasing savings by 3% per year Invested at the end of the year	Future Value of an Annuity - growing			

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### Questions

1. How much did you have to save in the first year under option #3?

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2. Under which of these saving examples did you reach “millionaire” status in 35 years?

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3. Experiment with the Number of Periods (t), and the % rate and see if you can reach millionaire status sooner than 35 years.

At how many years \_\_\_\_\_ and at what rate did you reach a million dollars? \_\_\_\_\_%

4. Try out different sites in order to increase your comfort level with the different calculators. What was your favorite calculator site?

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