

**Fast Cars**

**Case Scenario:**

Mr. and Mrs. Lewis win a lottery and give each of their children, Heather and Jack, \$9000 cash. Heather and Jack decide that they each want to buy a new sports car on their 50th birthday. They want to get a savings plan organized, but disagree about how they will save enough money. They are guaranteed a fixed rate of 7.5%/a compounded annually for the life of their investment and they promise not to withdraw any of their saved money until she/he is 50 years old.

- a) Heather is 24 years old. She chooses to invest \$7000 immediately and spends \$2000 on a television and stereo. She has no children and only a small bank loan left on her used car. She rents the small apartment that she lives in.
- b) Jack is 33 years old with a wife and 3 children. He lives in a house he purchased last year with a small down payment. He decides to invest all \$9000 immediately.

1. a) Using the compound interest formula, calculate the amount that each person will have saved after 5 years.

	Heather	Jack
Amount invested		
Length of time invested	5	5
Value of investment after 5 years.  Show calculations		

- b) What is the difference in the values of their investments after 5 years? \_\_\_\_\_

- c) Determine the total investment value for each person after 10 years.

	Heather	Jack
Amount invested		
Length of time invested	10	10
Value of investment after 10 years.  Show calculations		

- d) What is the difference in the values of their investments after 10 years? \_\_\_\_\_

- e) Explain why the difference between the investment values is growing.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

2. Jack invested all \$9000, so he is convinced that he will have more money on his 50<sup>th</sup> birthday than Heather will have when she turns 50 because Heather only invested \$7000.
- a) Without doing any more calculations, predict whether Jack's investment will add up to more than Heather's investment? Explain why or why not.

b) Now do the calculations to check.

	Heather	Jack
Amount invested		
Length of time invested (How long the money had been invested when they turned 50 – check their present ages on the previous page)		
Value of investment at age 50.  Show calculations		
Total amount of interest		

c) Who has more money at age 50? How much more?

d) Who has earned more interest? How much more?

4. Determine the risk tolerance for each person. Use specific examples to explain how the differences in their life stages affect her/his risk tolerance.

a) Heather \_\_\_\_\_ Why \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b) Jack \_\_\_\_\_ Why \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

5. Recommend an investment portfolio to suit each person's needs as follows:
- Each has eight investments. Specify how many of each type of investment (mutual funds, bonds, stocks) you think each person should have in her/his portfolio to accurately reflect her/his individual risk tolerance.
  - Justify your choice of investments. Be sure to specify what type of investments (mutual funds, bonds, and stocks) do and do not suit each person. Refer specifically to the information given about each person.

	# of each investment	Justification
<b>Heather</b> Type of Investor <hr/>	mutual funds _____ bonds _____ stocks _____	
<b>Jack</b> Type of Investor <hr/>	mutual funds _____ bonds _____ stocks _____	