Percent Increase/Decrease Problems Answer Key

Answers have been rounded to the nearest tenth of a percent

1. Alycia invested $8000 in a stock. In the first year the stock decreased in value by 10%. In the second year the stock decreased in value by 25%. What percentage gain is required in the third year in order for Alycia's stock to return to its original value?   Answer: 48.1%

2. Dylan invested $250,000 in a mutual fund. In the first year the mutual fund decreased in value by 20%. In the second year the mutual fund decreased in value by 25%. What percentage gain is required in the third year in order for Dylan's mutual fund to return to its original value?   Answer: 66.7%

3. Tina invested $30,000 in a stock. In the first year the stock increased in value by 10%. In the second year the stock decreased in value by 20%. What percentage gain is required in the third year in order for Tina's stock to return to its original value?   Answer: 13.6%

4. Khalid invested $100,000 in a mutual fund. In the first year the mutual fund decreased in value by 20%. In the second year the mutual fund increased in value by 25%. What percentage gain is required in the third year in order for Khalid's mutual fund to return to its original value?   Answer: 11.1%

5. Leticia invested $60,000 to become a partner in a small business. In the first year her share in the business decreased in value by 50%. In the second year her share in the business increased in value by 60%. What percentage gain is required in the third year in order for Leticia's share in the business to return to its original value?   Answer: 25%

6. Emeril invested $40,000 to become a partner in a restaurant. In the first year his share in the restaurant decreased in value by 25%. In the second year his share in the restaurant increased in value by 10%. What percentage gain is required in the third year in order for Emeril's share in the restaurant to return to its original value?   Answer: 21.2%

7. Rhianna invested $10,000 in a mutual fund. In the first year the mutual fund decreased in value by 20%. In the second year the mutual fund decreased in value by 10%. In the third year the mutual fund increased in value by 15%. What percentage gain is required in the fourth year in order for Rhianna's mutual fund to return to its original value?
       Answer: 24.2%

8. Ming invested $50,000 in a mutual fund. In the first year the mutual fund decreased in value by 6%. In the second year the mutual fund decreased in value by 10%. In the third year the mutual fund decreased in value by 10%. What percentage gain is required in the fourth year in order for Ming's mutual fund to return to its original value?
       Answer: 31.3%

9. In the year 2007, Donald's stock portfolio decreased in value by 25%. In the year 2008 his stock portfolio decreased in value by another 40%. What percentage gain is required in 2009 in order for Donald's stock portfolio to return to its value at the beginning of 2007?   Answer: 122.2%

10. In the year 2007, Giada's retirement fund decreased in value by 8%. In the year 2008 her retirement fund decreased in value by another 10%. What percentage gain is required in 2009 in order for Giada's retirement fund to return to its value at the beginning of 2007?   Answer: 20.8%