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

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

Period:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Calculating Simple Interest**

1. **Solve the following problems. All loans are single payment loans to be paid in full prior to one year (365 days). Please show all of your work.**
2. **Suppose we want to buy a tractor with a cost of $75,000.00, but want to finance it for a year until we get the money from our crop. John Deere credit will allow us to finance this tractor at 4.5% interest. Please use the above information to answer the following questions.**
3. **What is the cost of financing this tractor for a year?**

**We get our crop check early! We are ready to pay off our tractor 240 days after we took out the loan.**

1. **What is our interest for 240 days?**
2. **What is the total final payment for our loan?**

**Principal + Interest = total cost**

1. **We are going to plant cotton this year, we will need to plant 50lbs. to the acre and we will plant 200 acres. The seed company will finance our purchase of seed for up to one year at 7-3/4% interest/year. Please use the above information to answer the following questions.**
2. **What is the total cost of cotton seed needed to plant our 200 acres? This amount is known as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ portion of the loan**
3. **What would the total interest be if we carried out the loan for a full year?**
4. **What would the interest be if we paid the loan off after 305 days?**
5. **We will need to purchase a 30 hp tractor to use on our ranch. We found one at New Holland for $12,400.00. New Holland credit will finance this tractor for us for one year at 5 ½% interest, if we make a down payment of 10% of the purchase price. Please use the above information to answer the following questions.**
6. **What is the down payment? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
7. **What is the principal portion of the loan? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
8. **What is the total interest due on this loan on the payment date? \_\_\_\_\_\_\_\_\_\_\_\_\_**
9. **What is the total of the final payment? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
10. **What is the total cost of the tractor? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
11. **We have determined that we have been offered a really good price on alfalfa hay for our dairy cows. The price is $275.00/ ton. Our bank has determined that they will finance this purchase for a year at 4.25% interest. Our herd consumes 2000 lbs. of alfalfa per day.**
12. **How much hay will we need to purchase to feed our herd for the next year?**
13. **What is the purchase price of the hay (principal of the loan)?**
14. **What is the interest on the loan after one year?**
15. **What is the actual price per ton of the alfalfa calculating the cost of the interest on the loan?**
16. **We are looking to purchase a new Border Disc, after researching different types and sizes of Border discs we have found the following two options:**
17. **Option #1 Central California Implement- has priced the Border Disc at $7800.00. CCI will finance our purchase for one year at 8% interest and no down payment.**
18. **Option #2 Quality Machinery- has priced the Border Disc at $8500. QM will finance our purchase for one year at 7.5% interest with a 10% down payment.**

**Question: Which of the two purchase will cost us the least amount of money? Please choose an option by calculating out the long term cost of each option, then explain why you chose that option based on your calculations.**