

# Math for Financial Literacy ©2013

## Chapter 8: Loans—Checkpoint Solutions

### Checkpoint 8.1

1. Marvella received a loan from her bank in the sum of \$5,165 for a period of one year. The annual interest rate for the loan is 5.75%. The full amount of the principal and interest are due at the end of one year. Determine the amount of interest that Marvella will pay.

Answer: \$296.99

2. Alvin borrowed \$1,050 using the ordinary interest method. He agreed to pay an annual interest rate of 4.85%. He will repay the loan in six months. Calculate the amount of interest that Alvin will pay.

Answer: \$25.46

3. Dina borrowed \$2,890 using the method of exact interest. She will pay an annual interest rate of 6.45% and will repay the loan in 85 days. Calculate the total amount that Dina will pay back when she repays the loan.

Answer: \$2,933.43

4. Rafik borrowed \$1,600 for a one-year loan. He paid \$131.20 in interest. What was the annual interest rate on Rafik's loan?

Answer: 8.2%

5. Panna borrowed \$2,715 for a one-year term loan. She paid a total of \$162.90 in annual interest. What was Panna's annual interest rate?

Answer: 6%

### Checkpoint 8.2

1. Bianca has a car loan with monthly payments of \$381.86. She originally borrowed \$16,500 for four years at an annual interest rate of 5.25%. For her first monthly payment, calculate the amount that was paid in interest and the amount that was applied to the principal balance.

Answer: interest payment = \$72.19  
principal payment = \$309.67

2. Aaron financed his new motorcycle for \$18,250. He has a three-year loan at a 6.3% annual interest rate. The monthly payments are \$557.68. For his first monthly payment, calculate the amount that was paid in interest and the amount that was applied to the principal balance.

Answer:            interest payment = \$95.81  
                         principal payment = \$461.87

3. Martina and Luis want to purchase a new recreational vehicle for \$29,450. The bank requires a down payment of 12%. How much will Martina and Luis need to provide for a down payment? What is the amount they will need to finance?

Answer:            down payment = \$3,534  
                         amount financed = \$25,916

4. Maiko has a car loan. He originally borrowed \$7,850 at an annual interest rate of 5.45% for three years. Maiko's monthly payments are \$237.86. With six remaining payments, his principal balance is \$1,398.85, and he wants to pay the balance of the loan. Calculate an estimate of Maiko's early payoff amount.

Answer:            \$1,405.20

5. Safia has a truck loan. She originally borrowed \$14,950 at an annual interest rate of 5.65% for five years. Safia's monthly payments are \$286.60. With nine remaining payments, her principal balance is \$2,519.70. She wants to pay the balance of the loan. Calculate an estimate of Safia's early payoff amount.

Answer:            \$2,531.56

### Checkpoint 8.3

1. Rita is considering a payday loan for \$330. The payday lender charges 24% for a brokerage fee plus 0.3% in interest charges for a 14-day term loan. How much will Rita pay back at the end of the 14 days?

Answer:            \$410.19

2. Sherman is considering a payday loan for \$295. The payday lender charges 23.5% for a brokerage fee plus 0.4% in interest charges for a 14-day term loan. How much will Sherman pay back at the end of the 14 days?

Answer: \$365.51

3. Lynda is trying to decide if she wants to get a title loan on her car that is worth \$4,150. Check City will lend up to 18% of the value of a vehicle for a 30-day loan term. Check City charges a fee of 22.5% of the loan amount. If Lynda decides to get the full amount of the loan, how much would she have to pay back at the end of the 30 days?

Answer: \$915.08

4. Keenan pawns his trombone and receives \$65. Pawn Towne offers 30-day loans for a 1.65% interest charge and a 23.5% fee for storage and handling. How much will Keenan have to pay back in 30 days in order to reclaim his trombone?

Answer: \$79.85

5. Joyetta pawns a gold necklace and receives \$115. Best City Pawn offers 30-day loans for a 1.85% interest charge and a 21% fee for storage and handling. How much will Joyetta have to pay back in 30 days in order to reclaim her necklace?

Answer: \$143.92

## Checkpoint 8.4

1. Aasaf plans to attend the local community college. His first year's tuition and fees are an estimated \$2,245. Based on his family's income, Aasaf and his family are responsible for 35% of the tuition and fees. The remaining balance can be paid for using student loans. How much in student loans is Aasaf eligible for?

Answer: \$1,459.25

2. Carmen is attending a vocational school. Her tuition and fees for one year are \$4,318. Based on her family's income, Carmen and her family are responsible for 30% of the tuition and fees. The remaining balance can be paid for using a mixture of student loans and grants. How much tuition assistance is Carmen eligible for?

Answer: \$3,022.60

3. Darya recently graduated from college and has a total student loan amount of \$20,498. Her monthly payments will be \$204.98, and she will make those payments for ten years. How much interest will Darya pay on her student loans when they are completely paid off?

Answer: \$4,099.60

4. Marcel recently graduated from medical school and has a total student loan amount of \$110,475. His monthly payments will be \$1,104.75, and he will make those payments for ten years. How much interest will Marcel pay on his student loans when they are completely paid off?

Answer: \$22,095

5. Susita is attending an out-of-state university to obtain a four-year degree. The annual costs of tuition and fees are \$27,936. Susita has obtained an annual scholarship of \$2,500, annual grants in the amount of \$12,450, and a work-study program in the amount of \$6,550 per year. The remainder of Susita's tuition and fees will be paid for using student loans. At the end of the four-year degree, what will Susita's student loan balance be?

Answer: \$25,744