

$$\text{Total car costs per year} = \$3909.12 + \$752.84 + \$1560 + \$800 = \$7021.96$$

Next, divide by 12 to determine the amount Liam should budget per month.

$$\text{Monthly car expenses} = \$7021.96 \div 12 \approx \$585.16$$

Thus, Liam should plan to budget at least \$585.16 per month for car expenses. He should re-evaluate this amount yearly to determine if his expenses have changed.

Now work margin exercise 4.

Margin Exercise Answers

1. The down payment is \$3560 and the amount financed is \$14,240 2. a. \$212.84 b. \$1070.40
3. 9% 4. \$735.99

7.3 Exercises

Concept Check

Fill-in-the-Blank. Complete each sentence using information found in this section.

1. _____ is the amount agreed to be paid to the seller in exchange for the car.
2. Finance charge is the amount of _____ paid over the life of the loan.
3. The loans taken out to purchase a car are typically _____ loans.
4. The cost of gasoline, oil, tires, and tunes are considered _____ costs for a car.
5. _____ is the amount financed from the lender.
6. In addition to the _____, you must pay for auto insurance, any necessary repairs, and general maintenance costs.

True/False. Determine whether each statement is true or false. If a statement is false, explain how it can be changed so the statement will be true. (**Note:** There may be more than one acceptable change.)

7. The down payment is the amount the seller pays upfront to sell a car.
8. Auto insurance covers a wide variety of situations with your car, including theft and accidents.
9. You should include operating costs and repairs in your monthly budget.
10. APR reflects the true finance charge of your loan.

Practice

Determine the down payment amount and the amount financed. See Example 1.

1. A car with a purchase price of \$18,450 and a 10% down payment

2. A car with a purchase price of \$15,000 and a 20% down payment
3. An SUV with a purchase price of \$24,600 and a 15% down payment
4. A truck with a purchase price of \$21,850 and a 10% down payment
5. A van with a purchase price of \$27,250 and a 20% down payment
6. An SUV with a purchase price of \$36,500 and a 15% down payment

Determine the monthly payment for an auto loan with the given information. Round to the nearest cent, if necessary. See Example 2.

7. A \$15,000 loan at 6% APR over 3 years
8. A \$23,400 loan at 6.5% APR over 5 years
9. A \$19,240 loan at 8% APR over 6 years
10. A \$16,800 loan at 4% APR over 4 years
11. A \$18,750 loan at 4.5% APR over 5 years
12. A \$21,300 loan at 5.75% APR over 4 years

Determine the total finance charge over the life of the loan with the given information. See Example 2.

13. A 4-year loan with monthly payments of \$378.54 and a starting principal of \$16,600
14. A 5-year loan with monthly payments of \$361.01 and a starting principal of \$18,900
15. A 3-year loan with monthly payments of \$431.99 and a starting principal of \$14,200
16. A 5-year loan with monthly payments of \$418.94 and a starting principal of \$22,200
17. A 4-year loan with monthly payments of \$497.79 and a starting principal of \$19,750
18. A 6-year loan with monthly payments of \$279.72 and a starting principal of \$17,750

Determine the APR for each loan. See Example 3.

19. A 5-year loan with monthly payments of \$293.49 and a starting principal of \$15,000
20. A 4-year loan with monthly payments of \$471.49 and a starting principal of \$19,500

21. A 3-year loan with monthly payments of \$580.49 and a starting principal of \$18,800
22. A 4-year loan with monthly payments of \$546.85 and a starting principal of \$22,400
23. A 5-year loan with monthly payments of \$330.25 and a starting principal of \$17,500
24. A 3-year loan with monthly payments of \$619.11 and a starting principal of \$20,200

Applications.

Solve.

25. After purchasing a car, Eleanor adjusts her budget to cover most car-related expenses that may occur. The monthly payment for her loan is \$297.64, the cost of car insurance for 6 months is \$276.73, the estimated fuel cost per month is \$145, and she wants to set aside \$950 per year for repairs and other maintenance. How much should Eleanor budget per month for car expenses?
26. After purchasing a car, Tom adjusts his budget to cover most car-related expenses that may occur. The monthly payment for his loan is \$322.76, the cost of car insurance for 6 months is \$376.32, the estimated fuel cost per month is \$195, and he wants to set aside \$1200 per year for repairs and other maintenance. How much should Tom budget per month for car expenses?
27. Stephen is considering purchasing a new car and wants to make sure all of the car expenses fit into his budget of \$550 per month. The estimated monthly payment for a loan is \$324.32, the cost of car insurance for the year is \$589.44, the estimated fuel cost per month is \$100, and he wants to set aside \$750 per year for maintenance. What is the estimated monthly cost for buying a new car and will this fit into Stephen's budget?
28. Maya is considering purchasing a new car and wants to make sure all of the car expenses fit into her budget of \$675 per month. The estimated monthly payment for a loan is \$302.97, the cost of car insurance for the year is \$404.88, the estimated fuel cost per month is \$200, and she wants to set aside \$1800 per year for maintenance. What is the estimated monthly cost for buying a new car and will this fit into Maya's budget?
29. Alexander purchases a car and takes out a 4-year loan for \$17,400. The loan officer tells him that with an interest rate of 7%, his monthly payment will be \$424.78. What is the APR of the loan?
30. Kelli purchases a car and takes out a 5-year loan for \$20,500. The loan officer tells her that with an interest rate of 5.5%, her monthly payment will be \$410.78. What is the APR of the loan?

- 31.** Kylie purchases a car that has a purchase price of \$18,700 and makes a 15% down payment. She finances the remaining cost with a 4-year loan at 4.5% APR.

 - a.** Calculate the monthly payment for the car loan.
 - b.** Calculate the finance charge on the car loan after 4 years.
- 32.** Doug purchases a car that has a purchase price of \$23,600 and makes a 20% down payment. He finances the remaining cost with a 5-year loan at 6% APR.

 - a.** Calculate the monthly payment for the car loan.
 - b.** Calculate the finance charge on the car loan after 5 years.
- 33.** You are buying a car that has a purchase price of \$24,900. You plan to make a 25% down payment and finance the rest. How much is the down payment and what is the amount you will finance?
- 34.** You are buying a car that has a purchase price of \$17,700. You plan to make a 15% down payment and finance the rest. How much is the down payment and what is the amount you will finance?