

Name: _____
Teacher: _____
Class/ Block: _____
Date: _____

Unit 6: To buy or to lease?

Please answer each question. Clearly identify your final answer!!
No work or explanation = No Credit

Christina is buying a new Dodge charger for \$23,599.

1. What is the initial price of the car if she puts \$4,000 down and an interest rate of 4.12% for four years?

$$23,599 - 4000 = \$19,599$$

2. What is the future value of the loan?

$$FV = 19,599 \left(1 + \frac{0.0412}{12}\right)^{12 \cdot 4} = 19,599 (1 + 0.003433333)^{48} = \$23,103.78$$

3. How much interest will she owe for the loan?

$$\$23,103.78 - 19,599 = \$3,504.78$$

4. What is the monthly payments?

$$23,103.78 / 48 = \$481.33 \text{ per month}$$

5. Given the sell back price of the car is \$12,399, what is the total cost of the car?

$$4,000 + 23,103.78 - 12,399 = \$14,704.78$$

Another option she has is a lease where the monthly payment is \$375 for 4 years and she must make a one-time balloon payment of \$1,500 when she trades the car in.

6. What is the total cost of the car?

$$375 \times 48 = 18,000 + 1,500 = 19,500$$

7. What would the total cost of the car be if she paid \$350 for 5 years and the balloon payment was \$2,150?

$$350 \times 60 = 21,000 + 2,150 = 23,150$$

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Christina decided to keep looking around and found a dealership across town that has a new Ford Focus (trying to save money) for \$19,100.

8. What is the ^{present value?} initial price of the car if she puts 2.5% down and an interest rate of 3.99% for four years?
 $19,100 \times .025 = \$477.50$ $19,100 - 477.50 = 18,622.50$

9. What is the future value of the loan?
 $FV = 18,622.50 \left(1 + \frac{.0399}{12}\right)^{48} = 18,622.50 (1.003325)^{48} =$
 $18,622.50 (1.172731041) = 21,839.18$

10. How much interest will she owe for the loan?

$$21,839.18 - 18,622.50 = \$3,216.68$$

11. What is the monthly payments?

$$21,839.18 / 48 = \$454.98$$

12. Given the sell back price of the car is \$11,200, what is the total cost of the car?

$$477.50 + 21,839.18 = 22,316.68 - 11,200 = \$11,116.68$$

Another option she has is a lease where the monthly payment is \$412 for 3 years and she must make a one-time balloon payment of \$1,800 when she trades the car in.

13. What is the total cost of the car?

$$412 \times 36 = 14,832 + 1,800 = \$16,632$$

14. What would the total cost of the car be if she paid \$389 for 4 years and the balloon payment was \$1,570?

$$389 \times 48 = 18,672 + 1,570 = \$20,242$$