Name _____ Date _____

Installment Buying

If you want to purchase an expensive item, but do not have enough money to pay for it all at once, you may be able to afford to buy it on an installment plan. An **installment plan** allows you to purchase an item by making payments over time. Some installment plans require a **down payment**, a portion of the sales price, and then allow the buyer to pay for the rest in a series of regular payments. The **installment price** is the total of all of the payments, including the down payment. Installment agreements usually include a **finance charge**, which is the amount you pay to use the installment plan. Typically, an item bought on an installment plan costs more than its regular price. To calculate the finance charge, subtract the regular price from the installment price.

> *$199.50*
> *Installment plans:*
> *$19.15/mo for 12 mo*
> *OR*
> *$30 down, $16/mo for 12 mo*

Finance Charge = Installment Price – Regular Price

Example 1: You choose the installment plan without the down payment. Find the installment price and the finance charge.

| Step 1 | Multiply to find the total monthly payments (the installment price). | $12 \times \$19.15 = \$229.80$ |

The installment price is $229.80.

| Step 2 | Subtract to find the finance charge. | $\$229.80 - \$199.50 = \$30.30$ |

The finance charge is $30.30.

You may choose to pay a down payment when you get your purchase. In this case, the installment price is the total of the **installment payments** and the down payment.

Example 2: Jim chooses the installment plan with the down payment. Find the installment price and the finance charge.

| Step 1 | Multiply to find the total monthly payments. | $12 \times \$16 = \$192.00$ |

| Step 2 | Add to find the installment price. | $\$30 + 192 = \$222.00$ |

The installment price is $222.00.

| Step 3 | Subtract to find the finance charge. | $\$222.00 - \$199.50 = \$22.50$ |

The finance charge is $22.50.

Name _____ Date _____

Think About It

1. Why did the down payment in Example 2 decrease the finance charge?

_____

_____

2. If the item were financed for 18 months instead of 12 months, would the monthly payments be more or less? Would the installment price be more or less? Why?

_____

_____

_____

Practice

Remember to estimate whenever you use your calculator.
Find the installment price and the finance charge for Exercises 1–14.

	Regular price	Down payment	Monthly payment	Number of payments	Installment price	Finance Charge
1.	$85.00	$0.00	$15.00	6	_____	_____
2.	$102.00	$0.00	$14.00	9	_____	_____
3.	$198.65	$0.00	$18.00	12	_____	_____
4.	$305.76	$0.00	$27.50	12	_____	_____
5.	$405.00	$80.00	$42.00	9	_____	_____
6.	$598.00	$125.00	$44.00	12	_____	_____
7.	$829.85	$175.00	$80.76	9	_____	_____
8.	$932.96	$245.00	$64.27	12	_____	_____

9. You buy a DVD player on the installment plan. It usually sells for $89.95. You pay $11 per month for 9 months.

_____

10. You buy a television on the installment plan. It usually sells for $439.95. You pay $41 per month for 12 months.

_____

11. The advertisement for a class ring reads, "Nothing down and $17.50 a month for 6 months." The ring usually sells for $89.95.

_____

12. A coat you want is advertised for "$25 down and $35.50 a month for 6 months." The coat usually sells for $220.95.

_____

13. Caroline bought a $425.00 washing machine on an installment plan for $100.00 down and $42.19 per month for a year.

    a. What is the installment price? _____

    b. What is the finance charge? _____

14. Sam wants a car that costs $12,000.00. With a $500.00 down payment, he can buy it on an installment plan paying $201.67 per month for 6 years.

    a. What is the installment price? _____

    b. What is the finance charge? _____

Name _____ Date _____

Annual Percentage Rate (APR)

A lender should tell you what the APR is, but you should still figure it out for yourself. It might be more than you think. Use this formula to approximate the APR.

$$\text{Approximate APR} = \frac{24 \times \text{Finance charge}}{\text{Amount financed} \times (\text{Number of payments} + 1)}$$

You need to finance $400 for 12 months toward the cost of a refrigerator. The finance charge is $80. What is the APR?

Step 1 Substitute into the formula. Then solve.

$$\text{APR} = \frac{24 \times 80}{400 \times (12 + 1)} = \frac{\$1,920}{\$400 \times 13} = \frac{\$1,920}{\$5,200} = 0.3692307$$

Step 2 Round to the nearest thousandth and rename as a percent. $0.369 = 36.9\%$

The APR is 36.9%.

Find the approximate APR.

Amount Borrowed	Finance Charge	Number of Payments	APR
$400	$20	12	1. _____
$34.86	$2.64	6	2. _____
$375	$21	12	3. _____
$750	$78	18	4. _____
$830	$96.25	15	5. _____
$1,010	$119.50	18	6. _____
$99.95	$2.80	3	7. _____
$65.60	$8.75	9	8. _____

Installment Buying

Buying on an Installment Plan

!k About It

1. Because less money was owed on installment. (However, you cannot assume that the finance charge for one installment plan is less than another plan just because there is a down payment.)

2. The monthly payments would be less because there would be more payments. The installment price would be more because the money would be paid back over a longer period of time.

Practice

1. $90; $5
2. $126; $24
3. $216; $17.35
4. $330; $24.24
5. $458; $53
6. $653; $55
7. $901.84; $71.99
8. $1,016.24; $83.28
9. $99; $9.05
10. $492; $52.05
11. $105; $15.05
12. $238; $17.05
13. a. $606.28
    b. $181.28
14. a. $15,020.24
    b. $3,020.24

Extension

1. 9.2%
2. 26.0%
3. 10.3%
4. 13.1%
5. 17.4%
6. 14.9%
7. 16.8%
8. 32.0%

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Problem Solving Application

1. $523.20; $43.20
2. $784.80; $64.80
3. $588.60; $48.60
4. $1,190.28; $98.28
5. $2,880.00; $480.00
6. $4,200.00; $600.00
7. $5,220.72; $220.72
8. $5,273.76; $1,378.76
9. $1,046.40; $86.40
10. $199
11. $786.80

Pages 109–110

Decision Making

1. 19.8%
2. 10.8%
3. $11\frac{1}{2}$%
4. $99.92
5. $159.04
6. $54.98
7. 18
8. 12
9. $362.70
10. $140
11. $798.80
12. Payments not fixed.
13. Payments fixed.
14. Payments fixed; interest tax deductible.
15. School's tuition plan
16. Home equity loan
17. School's tuition plan
18. Home equity loan
19. Credit card
20. Home equity loan
21. $436.10
22. $457.52
23. Unsecured loan, school's tuition plan; $201.28
24. No; reasons may vary
25. Answers may vary.

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Decision Making: More Practice

1. 13.5%
2. 15.75%
3. $332.46
4. $86.58
5. 60
6. 24
7. $1,386.90
8. $619.92
9. Payments fixed
10. Payments fixed
11. Credit card
12. Home equity
13. $766.98
14. $207.90

Pages 113–115

Problem Solving Strategy

Practice

1. It was the same.
2. $1.48
3. $2.55
4. $4.00
5. $1,210; $1,331
6. $3,660
7. $309; $28
8. $8.28
9. $3.72
10. $3,240; $3,888

Pages 116–117

Money Tips

1. $16,800
2. 10.7%
3. a. 50%
   b. 10.7%
   c. 28.6%
   d. 10.7%