

Name \_\_\_\_\_

**7-1B Lesson Master****Questions on SPUR Objectives**

See pages 452–455 for objectives.

**VOCABULARY**

1. Arturo deposits \$3,000 into a savings account. At the end of the year, the bank pays him 4% interest, which amounts to \$120. The total amount of money in his account is now \$3,120. The next year, the bank will pay him 4% interest on \$3,120, assuming he makes no deposits or withdrawals.

- a. Is the interest in the second year simple or compound interest?  
Why or why not?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- b. What is the principal in this situation? \_\_\_\_\_

- c. What is the annual yield? \_\_\_\_\_

- d. What is the total interest paid to Arturo at the end of the second year? \_\_\_\_\_

2. Name the following for the expression  $-3x^5$ .

- a. base \_\_\_\_\_

- b. power \_\_\_\_\_

- c. exponent \_\_\_\_\_

- d. coefficient \_\_\_\_\_

**USES Objective D**

3. a. Write an expression that you could use to find the amount in an account if \$10,000 is invested at 6% annual yield for 10 years. \_\_\_\_\_

- b. Write an expression that you could use to find the amount in an account if  $P$  dollars is invested at 6% annual yield for  $t$  years. \_\_\_\_\_

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4. A bank uses the spreadsheet below to show the amount in a savings account earning 4.5% interest annually. The principal invested is \$2,100.

	A	B	C
1	Year	Balance	Annual Interest
2	0	2,100.00	
3	1	2,194.50	94.50
4	2	2,293.25	98.75
5	3	2,396.45	103.20
6	4		

- a. *Multiple Choice.* Which expression does the bank use to calculate the balance in the savings account? \_\_\_\_\_

A  $2,100(0.45)^t$    B  $2,100(0.045)^t$    C  $2,100(1.045)^t$    D  $2,100(1.45)^t$

- b. What number should appear in cell B6? \_\_\_\_\_

- c. What number should appear in cell C6? \_\_\_\_\_

- d. What trend do you notice in the Annual Interest column?  
\_\_\_\_\_

5. Most car-loan companies charge interest every month on your balance from the previous month. Suppose your balance is \$15,720 and your monthly interest rate is 0.73%. How much interest will you pay that month? \_\_\_\_\_

6. Suppose Shawna deposited \$400 in a savings account that has an annual yield of 4.7%.

- a. How much money will Shawna have in her savings account at the end of 8 years? \_\_\_\_\_

- b. How much interest will Shawna have earned? \_\_\_\_\_

7. Which investment yields more? Explain your answer.

a. an amount invested for 5 years at an annual yield of 3%.

b. the same amount invested for 2.5 years at an annual yield of 6%.

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