UNIT 1 • RELATIONSHIPS BETWEEN QUANTITIES Lesson 1: Interpreting Structure in Expressions

Problem-Based Task 1.1.2: Searching for a Greater Savings

Austin plans to open a savings account. The amount of money in a savings account can be found by using the equation $s = p \cdot (1 + r)^t$, where p is the principal, or the original amount deposited into the account; r is the rate of interest; and t is the amount of time. Austin is considering two savings accounts. He will deposit \$1,000.00 as the principal into either account. In Account A, the interest rate will be 0.015 per year for 5 years. In Account B, the interest rate will be 0.02 per year for 3 years. If he could, would it be wise for Austin to leave his money in the account that has less savings for an additional year? Explain your reasoning.

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Problem-Based Task 1.1.2: Searching for a Greater Savings Coaching

a. What is the total amount in Austin's savings if he chooses Account A?

b. What is the total amount in Austin's savings if he chooses Account B?

c. Which account has more money at the end of the term?

d. If Austin left his money in the account that has less savings for an additional year, would this change which account he might select? Explain your answer.