

## Matrices in the Oven

The Woos' bakery provides another example for multiplying matrices. The questions in this activity are similar to those in *Flying Matrices*. Pay careful attention to the arithmetic they involve.

For this activity, you can ignore the constraints from the *More Cookies* problem. The facts about the ingredients remain the same.

- One dozen plain cookies requires 1 pound of cookie dough (and no icing or chocolate chips).
- One dozen iced cookies requires 0.7 pound of cookie dough and 0.4 pound of icing (and no chocolate chips).
- One dozen chocolate chip cookies requires 0.9 pound of cookie dough and 0.15 pound of chocolate chips (and no icing).

1. Put all of this information into a matrix. Be sure to label your rows and columns.
2. Suppose that on Wednesday, the Woos made 30 dozen plain cookies, 45 dozen iced cookies, and 30 dozen chocolate chip cookies. On Thursday, they made 28 dozen plain cookies, 32 dozen iced cookies, and 25 dozen chocolate chip cookies.

Put all of this information into a matrix.

3. Combine the information in your answers to Questions 1 and 2 to create a matrix that shows the total amount *of each ingredient* used on Wednesday and on Thursday.
4. Describe how you calculated the numbers for your matrix in Question 3.

