



**Another Way to Solve Example 4, page 822**

**MULTIPLE REPRESENTATIONS** In Example 4 on page 822, you saw how to solve a problem about mixing paint by using a rational equation. You can also solve the problem by using a table or by reinterpreting the problem.

**PROBLEM**

**PAINT MIXING** You have an 8 pint mixture of paint that is made up of equal amounts of yellow paint and blue paint. To create a certain shade of green, you need a paint mixture that is 80% yellow. How many pints of yellow paint do you need to add to the mixture?

**METHOD 1**

**Use a Table** One alternative approach is to use a table.

The mixture has 8 pints of paint. Because the mixture has an equal amount of yellow paint and blue paint, the mixture has  $8 \div 2 = 4$  pints of yellow paint.

**STEP 1** **Make** a table that shows the percent of the mixture that is yellow paint after you add various amounts of yellow paint.

A mixture with 6 pints of yellow paint is the result of adding 2 pints of yellow paint to the mixture.

This amount of yellow paint gives you the percent yellow you want.

| Yellow paint (pints) | Paint in mixture (pints) | Percent of mixture that is yellow paint |
|----------------------|--------------------------|---|
| 4                    | 8                        | $\frac{4}{8} = 50\%$                    |
| 6                    | 10                       | $\frac{6}{10} = 60\%$                   |
| 8                    | 12                       | $\frac{8}{12} \approx 67\%$             |
| 10                   | 14                       | $\frac{10}{14} \approx 71\%$            |
| 12                   | 16                       | $\frac{12}{16} = 75\%$                  |
| 14                   | 18                       | $\frac{14}{18} \approx 78\%$            |
| 15                   | 19                       | $\frac{15}{19} \approx 79\%$            |
| 16                   | 20                       | $\frac{16}{20} = 80\%$                  |

**STEP 2** **Find** the number of pints of yellow paint needed. Subtract the number of pints of yellow paint already in the mixture from the total number of pints of yellow paint you have:  $16 - 4 = 12$ .

► You need to add 12 pints of yellow paint.