Choose a Multiplication Method

Estimate. Then use regrouping to find 47 × 89.

$$\begin{array}{r} 89 \\ \times\ 47 \end{array}$$

Step 1 Estimate the product.   50 × 90 = 4,500

Step 2 Multiply the 9 ones by the 7 ones. Regroup the 63 ones as 6 tens 3 ones.

$$\begin{array}{r} ^{6}89 \\ \times\ 47 \\ \hline 3 \end{array}$$

Step 3 Multiply the 8 tens, or 80, by the 7 ones, or 7. Add the regrouped tens.
Regroup the 62 tens as 6 hundreds 2 tens.

$$\begin{array}{r} ^{6}89 \\ \times\ 47 \\ \hline 623 \end{array}$$

Step 4 Multiply the 9 ones by the 4 tens, or 40. Regroup the 36 tens as 3 hundreds 6 tens.

$$\begin{array}{r} ^{3}\cancel{8}9 \\ \times\ 47 \\ \hline 623 \\ 60 \end{array}$$

Step 5 Multiply the 8 tens, or 80, by the 4 tens, or 40. Add the regrouped tens. Regroup the 35 hundreds as 3 thousands 5 hundreds.

$$\begin{array}{r} ^{3}\cancel{8}9 \\ \times\ 47 \\ \hline 623 \\ 3,560 \end{array}$$

Step 6 Add the partial products.

So, 47 × 89 = **4,183**. Since 4,183 is close to the estimate of 4,500, it is reasonable.

$$\begin{array}{r} ^{3}\cancel{8}9 \\ \times\ 47 \\ \hline 623 \\ +\ 3,560 \\ \hline 4,183 \end{array}$$

Estimate. Then choose a method to find the product.

1 Estimate: _____

$$\begin{array}{r} 76 \\ \times\ 31 \end{array}$$

2 Estimate: _____

$$\begin{array}{r} 24 \\ \times\ 35 \end{array}$$

3 Estimate: _____

$$\begin{array}{r} 14 \\ \times\ 28 \end{array}$$

4 Estimate: _____

$$\begin{array}{r} 64 \\ \times\ 56 \end{array}$$