## Multiplication Methods

### Method A (Grid Multiplication):

\[
\begin{array}{c|c}
50 & 2 \\
\hline
30 & 1500 \\
7 & 350 \\
\hline
\end{array}
\]

\[
\begin{array}{c|c|c}
50 & 2 & 1500 \\
\hline
30 & 1500 & 350 \\
7 & 60 & + 14 \\
\hline
& & 1924 \\
\end{array}
\]

\[52 \times 37 = 1924\]

### Method B (Decomposition):

\[
\begin{align*}
52 \times 3 & = 156 \\
52 \times 30 & = 1560 \\
52 \times 7 & = 364 \\
\end{align*}
\]

\[
\begin{align*}
& 1560 \\
+ & 364 \\
\hline
& 1924 \\
\end{align*}
\]

### Method C (Chinese Multiplication):

\[52 \times 37 = 1924\]

### Method D (Long Multiplication):

\[
\begin{array}{c}
52 \\
\times 37 \\
\hline
1560 \\
+ 364 \\
\hline
1924 \\
\end{array}
\]

### Method E (Egyptian Multiplication):

\[
\begin{align*}
1 & \times 37 \\
2 & \times 74 \\
4 & \times 148 \\
8 & \times 296 \\
16 & \times 592 \\
32 & \times 1184 \\
\end{align*}
\]

\[
\begin{align*}
52 & = 32 + 16 + 4 \\
148 + 592 + 1184 & = 1924 \\
\end{align*}
\]

### Method F (Russian Multiplication):

\[
\begin{align*}
52 & \times 37 \\
26 & \times 74 \\
13 & \times 148 \\
6 & \times 296 \\
3 & \times 592 \\
1 & \times 1184 \\
\end{align*}
\]

\[148 + 592 + 1184 = 1924\]
| Activity 1: | Activity 2: |
| Choose the method most familiar to you. Discuss the method and make sure you understand how it works. | Choose one method and try it out for $27 \times 69$. Check that you get 1863. |
| Activity 3: | Activity 4: |
| Try out two different methods for $45 \times 68$. Check you get the same answer for both methods. | Use one method for $387 \times 73$. Check your answer by comparing it with someone else who has done it independently. |
| Activity 5: | Activity 6: |
| Choose two different methods and discuss what is similar about them and what makes one method easier. | Discuss all six methods and make sure you understand how they all work. |