Mental strategies - addition

1. Bridge to ten

Bridge to ten is when we count on to the next 10 and then add what is left.

\[
122 + 12 = 134
\]

\[
\begin{array}{c}
122 \\
\text{+8} \\
130 \\
\text{+4} \\
134
\end{array}
\]

2. Jump strategy

When we add, we can use the jump strategy to help us. Look at 57 + 22:
1. First we jump up by the tens.
2. Then we jump up by the units.

\[
\begin{array}{c}
57 \\
\text{+10} \\
67 \\
\text{+10} \\
77 \\
\text{+2} \\
79
\end{array}
\]

\[
57 + 22 = 79
\]

3. Split strategy

When adding large numbers in our heads, it can be easier to split one of the numbers into parts and add each part separately.

\[
\begin{align*}
112 + 46 & \quad 40 \quad 6 \\
& \quad 112 + 40 = 152 \\
& \quad 152 + 6 = 158
\end{align*}
\]

Here is another way to use the split strategy.

\[
42 + 32 = (4 \text{ tens} + 3 \text{ tens}) + (2 \text{ units} + 2 \text{ units}) \\
= 7 \text{ tens} + 4 \text{ units} \\
= 74
\]

4. Compensate strategy

Sometimes we round one number in the problem to make it easier to do in our heads. Then we adjust our answer to compensate:

\[
23 + 19 = 42
\]

\[
23 + 20 \quad 1 \\
\text{I rounded up by 1,}
\]

\[
43 \quad 1 \\
= 42 \quad \text{so I subtract 1.}
\]