

## Abstract Approach

Formal written method for addition-  
column addition

A vertical addition problem on a light green background. The columns are labeled H (Hundreds), T (Tens), and O (Ones) at the top. The numbers 65 and 72 are written in large black digits. A plus sign is to the left of 72. A horizontal line is drawn below 72. A small '1' with a diagonal slash is written below the line in the tens column, indicating a carry. Another horizontal line is drawn below the '1' and the 3 in the tens column. The final sum, 137, is written below the second line. An arrow points from the text box to the '5' in 65.

$$\begin{array}{r} \text{H} \quad \text{T} \quad \text{O} \\ 65 \\ + 72 \\ \hline 1 \text{ (carry)} \\ \hline 137 \end{array}$$

We can also use partitioning to do this type of calculation mentally...

$5 + 2 = 7$  (five ones add two ones is seven ones)

$60 + 70 = 130$  (six tens add seven tens is thirteen tens- one hundred, three tens and zero ones)

$130 + 7 = 137$

A vertical addition problem on a light blue background. The columns are labeled H (Hundreds), T (Tens), and O (Ones) at the top. The numbers 276 and 459 are written in large black digits. A plus sign is to the left of 459. A horizontal line is drawn below 459. Two '1's with diagonal slashes are written below the line, one in the tens column and one in the hundreds column, indicating carries. Another horizontal line is drawn below the second '1' and the 7 in the tens column. The final sum, 735, is written below the second line. An arrow points from the text box to the first '1' (carry) in the tens column.

$$\begin{array}{r} \text{H} \quad \text{T} \quad \text{O} \\ 276 \\ + 459 \\ \hline 1 \text{ (carry)} \quad 1 \text{ (carry)} \\ \hline 735 \end{array}$$

At Park Hall Academy, we carry above so we remember to add it on!

Then, we cross it off to show it has been added on!

Line the digits up in the correct place value column. Start with the least significant digit, in this case the ones.

$6 + 9 = 15$  record the five in the ones column and carry the one ten under the tens column. Children need to be saying: six ones add nine ones is fifteen ones (one ten and five ones).

Now move onto the tens column.

$70 + 50 = 120$  and then add the one ten that was carried over. So ...  $120 + 10 = 130$ . Record the three in the tens column and carry the one hundred under the hundreds column. Children need to be saying: seven tens add five tens is twelve tens (one hundred, two tens and zero ones). Add the one ten carried over makes one hundred and thirty.

Repeat with the hundred column.

$200 + 400 = 600$  and then add the one hundred that was carried over. So ...  $600 + 100 = 700$ . Record the seven under the hundreds column.

$276 + 459 = 735$

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