Long Addition

Study Development Worksheet

## Example

What is 133 + 479?

## Answer

We write the numbers in columns with their units, tens and hundreds lined up:

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1 | 3 | 3 |
| + | 4 | 7 | 9 |
|  |  |  |  |
|  |  |  |  |

Starting at the right, we add up each column. The units column totals 12, so we write 2 in the units column space and 1 underneath the lines in the tens column:

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1 | 3 | 3 |
| + | 4 | 7 | 9 |
|  |  |  | 2 |
|  |  | 1 |  |

We then add up everything in the tens column, including the 1 written underneath the lines:

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1 | 3 | 3 |
| + | 4 | 7 | 9 |
|  |  | 1 | 2 |
|  | 1 | ~~1~~ |  |

Finally, add the hundreds column:

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1 | 3 | 3 |
| + | 4 | 7 | 9 |
|  | 6 | 1 | 2 |
|  | ~~1~~ | ~~1~~ |  |

Therefore, the answer is 612.

Long Addition

Study Development Worksheet

## Questions

1. What is 504 + 291?
2. What is 814 + 5208?
3. What is 73 + 812 + 439?
4. What is 115.4 + 639.7?
5. What is 6521 + 8826 + 7767?

Long Addition

Study Development Worksheet

## Answers

1. We write the numbers into the lined-up format:

|  |  |  |  |
| --- | --- | --- | --- |
|  | 5 | 0 | 4 |
| + | 2 | 9 | 1 |
|  |  |  |  |
|  |  |  |  |

We first add up the units column:

|  |  |  |  |
| --- | --- | --- | --- |
|  | 5 | 0 | 4 |
| + | 2 | 9 | 1 |
|  |  |  | 5 |
|  |  |  |  |

Then the tens column:

|  |  |  |  |
| --- | --- | --- | --- |
|  | 5 | 0 | 4 |
| + | 2 | 9 | 1 |
|  |  | 9 | 5 |
|  |  |  |  |

Then the hundreds:

|  |  |  |  |
| --- | --- | --- | --- |
|  | 5 | 0 | 4 |
| + | 2 | 9 | 1 |
|  | 7 | 9 | 5 |
|  |  |  |  |

So, the answer is 795.

Long Addition

Study Development Worksheet

1. We write the numbers into the lined-up format:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | 8 | 1 | 4 |
| + | 5 | 2 | 0 | 8 |
|  |  |  |  |  |
|  |  |  |  |  |

We first add up the units column, which gives 12, so we write 2 in the units column and 1 underneath the lines in the tens column:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | 8 | 1 | 4 |
| + | 5 | 2 | 0 | 8 |
|  |  |  |  | 2 |
|  |  |  | 1 |  |

We then add up the tens column, including the 1 that is underneath the lines:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | 8 | 1 | 4 |
| + | 5 | 2 | 0 | 8 |
|  |  |  | 2 | 2 |
|  |  |  | ~~1~~ |  |

Then the hundreds column:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | 8 | 1 | 4 |
| + | 5 | 2 | 0 | 8 |
|  |  | 0 | 2 | 2 |
|  | 1 |  | ~~1~~ |  |

Long Addition

Study Development Worksheet

Finally, add up the thousands column

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | 8 | 1 | 4 |
| + | 5 | 2 | 0 | 8 |
|  | 6 | 0 | 2 | 2 |
|  | ~~1~~ |  | ~~1~~ |  |

So, the answer is 6022.

Long Addition

Study Development Worksheet

1. We write the numbers in the lined up format:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | 7 | 3 |
|  | 8 | 1 | 2 |
| + | 4 | 3 | 9 |
|  |  |  |  |
|  |  |  |  |

We add up the units column:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | 7 | 3 |
|  | 8 | 1 | 2 |
| + | 4 | 3 | 9 |
|  |  |  | 4 |
|  |  | 1 |  |

Then the tens column:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | 7 | 3 |
|  | 8 | 1 | 2 |
| + | 4 | 3 | 9 |
|  |  | 2 | 4 |
|  | 1 | ~~1~~ |  |

Then the hundreds column:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | 7 | 3 |
|  | 8 | 1 | 2 |
| + | 4 | 3 | 9 |
| 1 | 3 | 2 | 4 |
|  | ~~1~~ | ~~1~~ |  |

To give an answer of 1324.

Long Addition

Study Development Worksheet

1. We write the numbers into the lined-up format:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1 | 1 | 5 | . | 4 |
| + | 6 | 3 | 9 | . | 7 |
|  |  |  |  | . |  |
|  |  |  |  |  |  |

We add up the decimal column:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1 | 1 | 5 | . | 4 |
| + | 6 | 3 | 9 | . | 7 |
|  |  |  |  | . | 1 |
|  |  |  | ~~1~~ |  |  |

Then the units column:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1 | 1 | 5 | . | 4 |
| + | 6 | 3 | 9 | . | 7 |
|  |  |  | 5 | . | 1 |
|  |  | 1 | ~~1~~ |  |  |

Then the tens column:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1 | 1 | 5 | . | 4 |
| + | 6 | 3 | 9 | . | 7 |
|  |  | 5 | 5 | . | 1 |
|  |  | ~~1~~ | ~~1~~ |  |  |

Long Addition

Study Development Worksheet

Then the hundreds column:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1 | 1 | 5 | . | 4 |
| + | 6 | 3 | 9 | . | 7 |
|  | 7 | 5 | 5 | . | 1 |
|  |  | ~~1~~ | ~~1~~ |  |  |

To give an answer of 755.1.

Long Addition

Study Development Worksheet

1. We write the numbers in the lined-up format:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 6 | 5 | 2 | 1 |
|  | 8 | 8 | 2 | 6 |
| + | 7 | 7 | 6 | 7 |
|  |  |  |  |  |
|  |  |  |  |  |

We add the units column:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 6 | 5 | 2 | 1 |
|  | 8 | 8 | 2 | 6 |
| + | 7 | 7 | 6 | 7 |
|  |  |  |  | 4 |
|  |  |  | 1 |  |

Then the tens column:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 6 | 5 | 2 | 1 |
|  | 8 | 8 | 2 | 6 |
| + | 7 | 7 | 6 | 7 |
|  |  |  | 1 | 4 |
|  |  | 1 | ~~1~~ |  |

Then the hundreds column:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 6 | 5 | 2 | 1 |
|  | 8 | 8 | 2 | 6 |
| + | 7 | 7 | 6 | 7 |
|  |  | 1 | 1 | 4 |
|  | 2 | ~~1~~ | ~~1~~ |  |

Long Addition

Study Development Worksheet

Then finally the thousands column:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 6 | 5 | 2 | 1 |
|  | 8 | 8 | 2 | 6 |
| + | 7 | 7 | 6 | 7 |
| 2 | 3 | 1 | 1 | 4 |
|  | ~~2~~ | ~~1~~ | ~~1~~ |  |

To give a final answer of 23,114.

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