Arithmetics
Addition base 10
calculator-algebra.org

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Example

Add the one-digit numbers.

$$1 + 2 =$$
$$2 + 2 =$$
$$2 + 5 =$$
$$9 + 2 =$$
$$7 + 5 =$$
$$9 + 7 =$$
$$0 + 9 =$$

Example

Add the one-digit numbers.

$$1 + 2 \; = \; \textbf{?}$$
$$2 + 2 \; =$$
$$2 + 5 \; =$$
$$9 + 2 \; =$$
$$7 + 5 \; =$$
$$9 + 7 \; =$$
$$0 + 9 \; =$$

Example

Add the one-digit numbers.

$$
\begin{aligned}
1 + 2 &= 3 \\
2 + 2 &= \\
2 + 5 &= \\
9 + 2 &= \\
7 + 5 &= \\
9 + 7 &= \\
0 + 9 &=
\end{aligned}
$$

Example

Add the one-digit numbers.

$$
\begin{aligned}
1 + 2 &= 3 \\
2 + 2 &= \ ? \\
2 + 5 &= \\
9 + 2 &= \\
7 + 5 &= \\
9 + 7 &= \\
0 + 9 &=
\end{aligned}
$$

Example

Add the one-digit numbers.

$$
\begin{aligned}
1 + 2 &= 3 \\
\textcolor{red}{2 + 2} &\textcolor{red}{=} \textcolor{red}{4} \\
2 + 5 &= \\
9 + 2 &= \\
7 + 5 &= \\
9 + 7 &= \\
0 + 9 &=
\end{aligned}
$$

Example

Add the one-digit numbers.

$$
\begin{aligned}
1 + 2 &= 3 \\
2 + 2 &= 4 \\
2 + 5 &= ? \\
9 + 2 &= \\
7 + 5 &= \\
9 + 7 &= \\
0 + 9 &=
\end{aligned}
$$

Example

Add the one-digit numbers.

$$
\begin{aligned}
1 + 2 &= 3 \\
2 + 2 &= 4 \\
2 + 5 &= 7 \\
9 + 2 &= \\
7 + 5 &= \\
9 + 7 &= \\
0 + 9 &=
\end{aligned}
$$

Example

Add the one-digit numbers.

$$
\begin{aligned}
1 + 2 &= 3 \\
2 + 2 &= 4 \\
2 + 5 &= 7 \\
9 + 2 &= \mathbf{?} \\
7 + 5 &= \\
9 + 7 &= \\
0 + 9 &=
\end{aligned}
$$

Example

Add the one-digit numbers.

$$1 + 2 = 3$$
$$2 + 2 = 4$$
$$2 + 5 = 7$$
$$\color{red}{9 + 2 = 11}$$
$$7 + 5 =$$
$$9 + 7 =$$
$$0 + 9 =$$

Example

Add the one-digit numbers.

$$
\begin{aligned}
1 + 2 &= 3 \\
2 + 2 &= 4 \\
2 + 5 &= 7 \\
9 + 2 &= 11 \\
7 + 5 &= \mathbf{?} \\
9 + 7 &= \\
0 + 9 &=
\end{aligned}
$$

Example

Add the one-digit numbers.

$$
\begin{aligned}
1 + 2 &= 3 \\
2 + 2 &= 4 \\
2 + 5 &= 7 \\
9 + 2 &= 11 \\
\color{red}{7 + 5} &\color{red}{=} \color{red}{12} \\
9 + 7 &= \\
0 + 9 &=
\end{aligned}
$$

Example

Add the one-digit numbers.

$$
\begin{aligned}
1 + 2 &= 3 \\
2 + 2 &= 4 \\
2 + 5 &= 7 \\
9 + 2 &= 11 \\
7 + 5 &= 12 \\
9 + 7 &= \textbf{?} \\
0 + 9 &=
\end{aligned}
$$

Example

Add the one-digit numbers.

$$
\begin{aligned}
1 + 2 &= 3 \\
2 + 2 &= 4 \\
2 + 5 &= 7 \\
9 + 2 &= 11 \\
7 + 5 &= 12 \\
\color{red}{9 + 7} &\color{red}{=} \color{red}{16} \\
0 + 9 &=
\end{aligned}
$$

Example

Add the one-digit numbers.

$$
\begin{aligned}
1 + 2 &= 3 \\
2 + 2 &= 4 \\
2 + 5 &= 7 \\
9 + 2 &= 11 \\
7 + 5 &= 12 \\
9 + 7 &= 16 \\
0 + 9 &= \mathbf{?}
\end{aligned}
$$

Example

Add the one-digit numbers.

$$
\begin{aligned}
1 + 2 &= 3 \\
2 + 2 &= 4 \\
2 + 5 &= 7 \\
9 + 2 &= 11 \\
7 + 5 &= 12 \\
9 + 7 &= 16 \\
0 + 9 &= 9
\end{aligned}
$$

Example

Add the one-digit numbers.

$$1 + 3 \ =$$
$$4 + 7 \ =$$
$$2 + 8 \ =$$
$$9 + 8 \ =$$
$$5 + 5 \ =$$

Example

Add the one-digit numbers.

$$1 + 3 =$$
$$4 + 7 =$$
$$2 + 8 =$$
$$9 + 8 =$$
$$5 + 5 =$$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										

• To do one-digit addition quickly: make table with all possibilities.

Example

Add the one-digit numbers.

$$1 + 3 = \textbf{?}$$
$$4 + 7 =$$
$$2 + 8 =$$
$$9 + 8 =$$
$$5 + 5 =$$

+	0	1	2	3	4	5	6	7	8	9
0										
1				?						
2										
3										
4										
5										
6										
7										
8										
9										

• To do one-digit addition quickly: make table with all possibilities.

Example

Add the one-digit numbers.

$$1 + 3 = 4$$
$$4 + 7 =$$
$$2 + 8 =$$
$$9 + 8 =$$
$$5 + 5 =$$

+	0	1	2	3	4	5	6	7	8	9
0										
1				4						
2										
3										
4										
5										
6										
7										
8										
9										

• To do one-digit addition quickly: make table with all possibilities.

Example

Add the one-digit numbers.

$$1 + 3 \ = \ 4$$
$$4 + 7 \ = \ \textbf{?}$$
$$2 + 8 \ =$$
$$9 + 8 \ =$$
$$5 + 5 \ =$$

+	0	1	2	3	4	5	6	7	8	9
0										
1				4						
2										
3										
4								**?**		
5										
6										
7										
8										
9										

• To do one-digit addition quickly: make table with all possibilities.

Example

Add the one-digit numbers.

$$1 + 3 = 4$$
$$4 + 7 = 11$$
$$2 + 8 =$$
$$9 + 8 =$$
$$5 + 5 =$$

+	0	1	2	3	4	5	6	7	8	9
0										
1				4						
2										
3										
4								11		
5										
6										
7										
8										
9										

• To do one-digit addition quickly: make table with all possibilities.

Example

Add the one-digit numbers.

$$1 + 3 = 4$$
$$4 + 7 = 11$$
$$2 + 8 = \textbf{?}$$
$$9 + 8 =$$
$$5 + 5 =$$

+	0	1	2	3	4	5	6	7	8	9
0										
1				4						
2									?	
3										
4								11		
5										
6										
7										
8										
9										

• To do one-digit addition quickly: make table with all possibilities.

Example

Add the one-digit numbers.

$$1 + 3 = 4$$
$$4 + 7 = 11$$
$$2 + 8 = 10$$
$$9 + 8 =$$
$$5 + 5 =$$

+	0	1	2	3	4	5	6	7	8	9
0										
1				4						
2									10	
3										
4								11		
5										
6										
7										
8										
9										

• To do one-digit addition quickly: make table with all possibilities.

Example

Add the one-digit numbers.

$$1 + 3 = 4$$
$$4 + 7 = 11$$
$$2 + 8 = 10$$
$$9 + 8 = \textbf{?}$$
$$5 + 5 =$$

+	0	1	2	3	4	5	6	7	8	9
0										
1				4						
2									10	
3										
4								11		
5										
6										
7										
8										
9									**?**	

• To do one-digit addition quickly:
make table with all possibilities.

Example

Add the one-digit numbers.

$$1 + 3 = 4$$
$$4 + 7 = 11$$
$$2 + 8 = 10$$
$$9 + 8 = 17$$
$$5 + 5 =$$

+	0	1	2	3	4	5	6	7	8	9
0										
1				4						
2									10	
3										
4								11		
5										
6										
7										
8										
9								17		

• To do one-digit addition quickly: make table with all possibilities.

Example

Add the one-digit numbers.

$$
\begin{array}{rcl}
1 + 3 & = & 4 \\
4 + 7 & = & 11 \\
2 + 8 & = & 10 \\
9 + 8 & = & 17 \\
5 + 5 & = & \textbf{?}
\end{array}
$$

+	0	1	2	3	4	5	6	7	8	9
0										
1				4						
2									10	
3										
4								11		
5						**?**				
6										
7										
8										
9									17	

• To do one-digit addition quickly: make table with all possibilities.

Example

Add the one-digit numbers.

$$1 + 3 = 4$$
$$4 + 7 = 11$$
$$2 + 8 = 10$$
$$9 + 8 = 17$$
$$5 + 5 = 10$$

+	0	1	2	3	4	5	6	7	8	9
0										
1				4						
2									10	
3										
4								11		
5						10				
6										
7										
8										
9									17	

• To do one-digit addition quickly: make table with all possibilities.

Example

Add the one-digit numbers.

$$1 + 3 = 4$$
$$4 + 7 = 11$$
$$2 + 8 = 10$$
$$9 + 8 = 17$$
$$5 + 5 = 10$$

+	0	1	2	3	4	5	6	7	8	9
0	?	?	?	?	?	?	?	?	?	?
1	?	?	?	4	?	?	?	?	?	?
2	?	?	?	?	?	?	?	?	10	?
3	?	?	?	?	?	?	?	?	?	?
4	?	?	?	?	?	?	?	11	?	?
5	?	?	?	?	?	10	?	?	?	?
6	?	?	?	?	?	?	?	?	?	?
7	?	?	?	?	?	?	?	?	?	?
8	?	?	?	?	?	?	?	?	?	?
9	?	?	?	?	?	?	?	?	17	?

• To do one-digit addition quickly: make table with all possibilities.

Example

Add the one-digit numbers.

$$1 + 3 = 4$$
$$4 + 7 = 11$$
$$2 + 8 = 10$$
$$9 + 8 = 17$$
$$5 + 5 = 10$$

+	0	1	2	3	4	5	6	7	8	9
0	0	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9	10
2	2	3	4	5	6	7	8	9	10	11
3	3	4	5	6	7	8	9	10	11	12
4	4	5	6	7	8	9	10	11	12	13
5	5	6	7	8	9	10	11	12	13	14
6	6	7	8	9	10	11	12	13	14	15
7	7	8	9	10	11	12	13	14	15	16
8	8	9	10	11	12	13	14	15	16	17
9	9	10	11	12	13	14	15	16	17	18

• To do one-digit addition quickly: make table with all possibilities.

Example

Add the one-digit numbers.

$$+\frac{3}{5} \qquad\qquad +\frac{7}{6} \qquad\qquad +\frac{9}{2}$$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$+\begin{array}{r} 3 \\ 5 \\ \hline ? \end{array} \qquad +\begin{array}{r} 7 \\ 6 \\ \hline \end{array} \qquad +\begin{array}{r} 9 \\ 2 \\ \hline \end{array}$$

$3 + 5 = ?$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						?				
4										
5										
6										
7										
8										
9										

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$+\begin{array}{r} 3 \\ 5 \\ \hline 8 \end{array} \qquad +\begin{array}{r} 7 \\ 6 \\ \hline \end{array} \qquad +\begin{array}{r} 9 \\ 2 \\ \hline \end{array}$$

$3 + 5 = 8$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						8				
4										
5										
6										
7										
8										
9										

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$+\begin{array}{r} 3 \\ 5 \\ \hline 8 \end{array} \qquad +\begin{array}{r} 7 \\ 6 \\ \hline \end{array} \qquad +\begin{array}{r} 9 \\ 2 \\ \hline \end{array}$$

$3 + 5 = 8$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						8				
4										
5										
6										
7										
8										
9										

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$+\begin{array}{r} 3 \\ 5 \\ \hline 8 \end{array} \qquad +\begin{array}{r} 7 \\ 6 \\ \hline \end{array} \qquad +\begin{array}{r} 9 \\ 2 \\ \hline \end{array}$$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						8				
4										
5										
6										
7										
8										
9										

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$+\begin{array}{c} 3 \\ 5 \\ \hline 8 \end{array} \qquad +\begin{array}{c} 7 \\ 6 \\ \hline \end{array} \qquad +\begin{array}{c} 9 \\ 2 \\ \hline \end{array}$$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						8				
4										
5										
6										
7										
8										
9										

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$+\begin{matrix} 3 \\ 5 \\ \hline 8 \end{matrix} \qquad +\begin{matrix} ? \\ 7 \\ 6 \\ \hline ? \end{matrix} \qquad +\begin{matrix} 9 \\ 2 \\ \hline \end{matrix}$$

$7 + 6 =$ **?**

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						8				
4										
5										
6										
7							?			
8										
9										

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$+\begin{array}{r} 3 \\ 5 \\ \hline 8 \end{array} \qquad +\begin{array}{r} {}^{1} \\ 7 \\ 6 \\ \hline 3 \end{array} \qquad +\begin{array}{r} 9 \\ 2 \\ \hline {} \end{array}$$

$7 + 6 = 13$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						8				
4										
5										
6										
7							13			
8										
9										

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$+\begin{array}{r}3\\5\\\hline 8\end{array} \qquad +\begin{array}{r}{}^{1}\\7\\6\\\hline 3\end{array} \qquad +\begin{array}{r}9\\2\\\hline{}\end{array}$$

$7 + 6 = 1\,3$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						8				
4										
5										
6										
7							13			
8										
9										

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$\begin{array}{r} 3 \\ +\ 5 \\ \hline 8 \end{array} \qquad \begin{array}{r} \overset{1}{7} \\ +\ 6 \\ \hline 3 \end{array} \qquad \begin{array}{r} 9 \\ +\ 2 \\ \hline \end{array}$$

$7 + 6 = 13$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						8				
4										
5										
6										
7							13			
8										
9										

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$
\begin{array}{r} 3 \\ +\,5 \\ \hline 8 \end{array}
\qquad
\begin{array}{r} {}^{1}\;7 \\ +\,6 \\ \hline 1\,3 \end{array}
\qquad
\begin{array}{r} 9 \\ +\,2 \\ \hline \end{array}
$$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						8				
4										
5										
6										
7							13			
8										
9										

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$
\begin{array}{r} 3 \\ +\,5 \\ \hline 8 \end{array}
\qquad
\begin{array}{r} {\scriptstyle 1} \\ 7 \\ +\,6 \\ \hline 13 \end{array}
\qquad
\begin{array}{r} 9 \\ +\,2 \\ \hline \end{array}
$$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						8				
4										
5										
6										
7							13			
8										
9										

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$+\begin{array}{r} 3 \\ 5 \\ \hline 8 \end{array} \qquad \overset{1}{+}\begin{array}{r} 7 \\ 6 \\ \hline 13 \end{array} \qquad \overset{?}{+}\begin{array}{r} 9 \\ 2 \\ \hline ? \end{array}$$

$9 + 2 = ?$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						8				
4										
5										
6										
7							13			
8										
9			?							

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$+\begin{array}{r} 3 \\ 5 \\ \hline 8 \end{array} \qquad \overset{1}{+}\begin{array}{r} 7 \\ 6 \\ \hline 13 \end{array} \qquad \overset{1}{+}\begin{array}{r} 9 \\ 2 \\ \hline 1 \end{array}$$

$9 + 2 = 11$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						8				
4										
5										
6										
7							13			
8										
9			11							

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$
\begin{array}{r} 3 \\ +\,5 \\ \hline 8 \end{array}
\qquad
\begin{array}{r} {}^{1} \\ 7 \\ +\,6 \\ \hline 13 \end{array}
\qquad
\begin{array}{r} {}^{1} \\ 9 \\ +\,2 \\ \hline 1 \end{array}
$$

$9 + 2 = 1\textcolor{red}{1}$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						8				
4										
5										
6										
7							13			
8										
9			11							

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$+\frac{\begin{array}{r}3\\5\end{array}}{8} \qquad +\frac{\begin{array}{r}{}^{1}\\7\\6\end{array}}{13} \qquad +\frac{\begin{array}{r}{}^{1}\\9\\2\end{array}}{1}$$

$9 + 2 = 1\,1$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						8				
4										
5										
6										
7							13			
8										
9			11							

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$+\begin{array}{r}3\\5\\\hline 8\end{array}\qquad +\begin{array}{r}^{1}\\7\\6\\\hline 13\end{array}\qquad +\begin{array}{r}^{1}\\9\\2\\\hline 11\end{array}$$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						8				
4										
5										
6										
7							13			
8										
9			11							

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$
\begin{array}{r} 3 \\ +\,5 \\ \hline 8 \end{array}
\qquad
\begin{array}{r} {}^{1} \\ 7 \\ +\,6 \\ \hline 13 \end{array}
\qquad
\begin{array}{r} {}^{1} \\ 9 \\ +\,2 \\ \hline 11 \end{array}
$$

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						8				
4										
5										
6										
7							13			
8										
9			11							

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$+\begin{array}{r} 3 \\ 5 \\ \hline 8 \end{array} \qquad \overset{1}{+}\begin{array}{r} 7 \\ 6 \\ \hline 13 \end{array} \qquad \overset{1}{+}\begin{array}{r} 9 \\ 2 \\ \hline 11 \end{array}$$

+	0	1	2	3	4	5	6	7	8	9
0	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**
1	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**
2	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**
3	**?**	**?**	**?**	**?**	**?**	8	**?**	**?**	**?**	**?**
4	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**
5	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**
6	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**
7	**?**	**?**	**?**	**?**	**?**	**?**	13	**?**	**?**	**?**
8	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**	**?**
9	**?**	**?**	11	**?**	**?**	**?**	**?**	**?**	**?**	**?**

• Addition can also be written in columns.

Example

Add the one-digit numbers.

$$+\dfrac{\begin{array}{r}3\\5\end{array}}{8} \qquad +\dfrac{\begin{array}{r}{}^{1}\\7\\6\end{array}}{1\,3} \qquad +\dfrac{\begin{array}{r}{}^{1}\\9\\2\end{array}}{1\,1}$$

+	0	1	2	3	4	5	6	7	8	9
0	0	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9	10
2	2	3	4	5	6	7	8	9	10	11
3	3	4	5	6	7	8	9	10	11	12
4	4	5	6	7	8	9	10	11	12	13
5	5	6	7	8	9	10	11	12	13	14
6	6	7	8	9	10	11	12	13	14	15
7	7	8	9	10	11	12	13	14	15	16
8	8	9	10	11	12	13	14	15	16	17
9	9	10	11	12	13	14	15	16	17	18

• Addition can also be written in columns.

Example

$$+\begin{array}{r} 23 \\ \underline{34} \end{array}$$

Example

$$\begin{array}{r} 2\,3 \\ +\ 3\,4 \\ \hline \textbf{?} \end{array}$$

$3 + 4 = \textbf{?}$

Example

$$+\begin{array}{r} 2\,3 \\ 3\,4 \\ \hline 7 \end{array}$$

$3 + 4 = 7$

Example

$$+\begin{array}{r} 23 \\ 34 \\ \hline 7 \end{array}$$

$3 + 4 = 7$

Example

$$+\begin{array}{r} \color{red}2\,3 \\ \color{red}3\,4 \\ \hline \color{red}?\,7 \end{array}$$

$\color{red}2 + 3 = ?$

Example

$$
\begin{array}{r}
2\,3 \\
+\ 3\,4 \\
\hline
5\,7
\end{array}
$$

$2 + 3 = 5$

Example

$$
\begin{array}{r}
2\,3 \\
+\ 3\,4 \\
\hline
\textcolor{red}{5}7
\end{array}
$$

$2 + 3 = \textcolor{red}{5}$

Example

$$
\begin{array}{r}
2\,3 \\
+\,3\,4 \\
\hline
5\,7
\end{array}
$$

Example

$$\begin{array}{r} 2\,3 \\ +\ 3\,4 \\ \hline 5\,7 \end{array}$$

Example

$$+\ \begin{array}{r} 67 \\ 8 \\ \hline \end{array}$$

Example

$$\begin{array}{r} {\scriptstyle ?} \\ 6\,7 \\ +\ \ 8 \\ \hline ? \end{array}$$

$7 + 8 = ?$

Example

$$\begin{array}{r} {}^{1} \\ 6\,7 \\ +8 \\ \hline 5 \end{array}$$

$7 + 8 = 15$

Example

$$
\begin{array}{r}
\scriptstyle 1 \\
6\,7 \\
+8 \\
\hline
\textcolor{red}{5}
\end{array}
$$

$7 + 8 = 1\textcolor{red}{5}$

Example

$$
\begin{array}{r}
\overset{1}{} \\
+\,6\,7 \\
8 \\
\hline
5
\end{array}
$$

$7 + 8 = 1\,5$

Example

$$\begin{array}{r} {}^{1}\\ {}6\,7\\ +\quad 8\\ \hline ?\,5 \end{array}$$

$1 + 6 + = ?$

Example

$$+\begin{array}{c} \overset{1}{6}7 \\ 8 \\ \hline 75 \end{array}$$

$1 + 6 += 7$

Example

$$\begin{array}{r} \overset{1}{}6\,7 \\ +8 \\ \hline 7\,5 \end{array}$$

$1 + 6 += 7$

Example

$$
\begin{array}{r}
{\scriptstyle 1} \\
6\,7 \\
+8 \\
\hline
7\,5
\end{array}
$$

Example

$$
\begin{array}{r}
{\scriptstyle 1} \\
6\,7 \\
+8 \\
\hline
7\,5
\end{array}
$$

Example

$$+\ \begin{array}{r} 67 \\ 962 \\ \hline \end{array}$$

Example

$$+ \quad \begin{array}{r} 6\,7 \\ 96\,2 \\ \hline ? \end{array}$$

$7 + 2 = ?$

Example

$$+ \begin{array}{r} 6\textcolor{red}{7} \\ 96\textcolor{red}{2} \\ \hline \textcolor{red}{9} \end{array}$$

$\textcolor{red}{7} + \textcolor{red}{2} = \textcolor{red}{9}$

Example

$$+\begin{array}{r} 67 \\ 962 \\ \hline 9 \end{array}$$

$7 + 2 = 9$

Example

$$
\begin{array}{r}
\textbf{?} \\
\ \textbf{6}7 \\
+\ \ 9\textbf{6}2 \\
\hline
\textbf{?}9
\end{array}
$$

$6 + 6 = \textbf{?}$

Example

$$
\begin{array}{r}
{}^{1} \\
6\,7 \\
+\ 9\,6\,2 \\
\hline
2\,9
\end{array}
$$

$6 + 6 = 1\,2$

Example

$$\begin{array}{r} {\scriptstyle 1} \\ 67 \\ +\ 962 \\ \hline {\color{red}2}9 \end{array}$$

$6 + 6 = 1{\color{red}2}$

Example

$$+\ \begin{array}{r} \overset{1}{6}\,7 \\ 9\,6\,2 \\ \hline 2\,9 \end{array}$$

$6 + 6 = 12$

Example

$$\begin{array}{r} {\scriptstyle\text{? 1}} \\ 67 \\ + 962 \\ \hline ?29 \end{array}$$

$1 + 9 = ?$

Example

$$
\begin{array}{r}
{}^{1\ 1} \\
67 \\
+\ 962 \\
\hline
029
\end{array}
$$

$1 + 9 = 10$

Example

$$
\begin{array}{r}
^{1\ 1} \\
67 \\
+\ 962 \\
\hline
{\color{red}0}29
\end{array}
$$

$1 + 9 = 1{\color{red}0}$

Example

$$
\begin{array}{r}
{\color{red}1}\ 1 \\
67 \\
+\ \ 962 \\
\hline
029
\end{array}
$$

$1 + 9 = {\color{red}1}0$

Example

$$
\begin{array}{r}
\ {\color{red}1}\ {}^{1} \\
67 \\
+\ \ 962 \\
\hline
{\color{red}1}029
\end{array}
$$

Example

$$
\begin{array}{r}
{\scriptstyle 1\ 1} \\
67 \\
+\ 962 \\
\hline
1029
\end{array}
$$

Example

$$
\begin{array}{r}
3\,5\,4\,6\,1 \\
+\ 6\,8\,0\,7\,2 \\
\hline
\end{array}
$$

Example

$$+\ \begin{array}{r} 3546\textcolor{red}{1} \\ 6807\textcolor{red}{2} \\ \hline \textcolor{red}{?} \end{array}$$

$1 + 2 = ?$

Example

$$
\begin{array}{r}
3546\textcolor{red}{1} \\
+\quad 6807\textcolor{red}{2} \\
\hline
\textcolor{red}{3}
\end{array}
$$

$\textcolor{red}{1} + \textcolor{red}{2} = \textcolor{red}{3}$

Example

$$+\ \begin{array}{r} 35461 \\ 68072 \\ \hline \textcolor{red}{3} \end{array}$$

$1 + 2 = \textcolor{red}{3}$

Example

$$\begin{array}{r} {\color{red}?} \\ 354{\color{red}6}1 \\ +\quad 680{\color{red}7}2 \\ \hline {\color{red}?}3 \end{array}$$

$6 + 7 = ?$

Example

$$
\begin{array}{r}
\,\,{\scriptstyle 1} \\
354{\color{red}6}1 \\
+\quad 680{\color{red}7}2 \\
\hline
{\color{red}3}3
\end{array}
$$

${\color{red}6} + {\color{red}7} = {\color{red}13}$

Example

$$\begin{array}{r} {}^{1} \\ 35461 \\ +68072 \\ \hline 33 \end{array}$$

$6 + 7 = 13$

Example

$$
\begin{array}{r}
\overset{\textcolor{red}{1}}{} \\
35461 \\
+68072 \\
\hline
33
\end{array}
$$

$6 + 7 = \textcolor{red}{1}3$

Example

$$
\begin{array}{r}
{\scriptstyle 1} \\
3\,5\,\color{red}{4}\,6\,1 \\
+\quad 6\,8\,\color{red}{0}\,7\,2 \\
\hline
\color{red}{?}\,3\,3
\end{array}
$$

$1 + 4 + 0 = ?$

Example

$$
\begin{array}{r}
\ \ {}^{1} \\
3\,5\,\color{red}{4}\,6\,1 \\
+\ \ 6\,8\,\color{red}{0}\,7\,2 \\
\hline
\color{red}{5}\,3\,3 \\
\end{array}
$$

$1 + 4 + 0 = 5$

Example

$$\begin{array}{r} {}^{1} \\ 35461 \\ +68072 \\ \hline 533 \end{array}$$

$1 + 4 + 0 = 5$

Example

$$
\begin{array}{r}
\ {}^{\textbf{?}}\ {}^{1} \\
3\,\textbf{5}\,4\,6\,1 \\
+\ \ 6\,\textbf{8}\,0\,7\,2 \\
\hline
\textbf{?}\,5\,3\,3
\end{array}
$$

$5 + 8 = \textbf{?}$

Example

$$
\begin{array}{r}
\overset{1}{3}\overset{1}{5}461 \\
+\ 68072 \\
\hline
3533
\end{array}
$$

$5+8=13$

Example

$$\begin{array}{r} {}^1{}^1 \\ 35461 \\ +68072 \\ \hline 3533 \end{array}$$

$5 + 8 = 13$

Example

$$\begin{array}{r} {\color{red}1} 1 \\ 35461 \\ + 68072 \\ \hline 3533 \end{array}$$

$5 + 8 = {\color{red}1}3$

Example

$$
\begin{array}{r}
\textbf{?}\,1\quad 1 \\
3\,5\,4\,6\,1 \\
+\quad 6\,8\,0\,7\,2 \\
\hline
\textbf{?}\,3\,5\,3\,3
\end{array}
$$

$1 + 3 + 6 = \textbf{?}$

Example

$$
\begin{array}{r}
{\scriptstyle 1\ 1\qquad 1} \\
3\,5\,4\,6\,1 \\
+\ \ 6\,8\,0\,7\,2 \\
\hline
0\,3\,5\,3\,3
\end{array}
$$

$1 + 3 + 6 = 10$

Example

$$
\begin{array}{r}
{\scriptstyle 1\ 1\quad\ 1} \\
35461 \\
+\ \ 68072 \\
\hline
\textcolor{red}{0}3533
\end{array}
$$

$1 + 3 + 6 = 1\textcolor{red}{0}$

Example

$$\begin{array}{r} \overset{1\ 1\quad\ 1}{35461} \\ +\ 68072 \\ \hline 03533 \end{array}$$

$1 + 3 + 6 = 10$

Example

$$
\begin{array}{r}
{\scriptstyle 1\ 1\quad\ 1} \\
35461 \\
+\ \ 68072 \\
\hline
103533
\end{array}
$$

Example

$$
\begin{array}{r}
{\scriptstyle 1\ 1\quad 1} \\
35461 \\
+\quad 68072 \\
\hline
103533
\end{array}
$$

We covered addition by example; algorithm follows. Feel free to skip.

Algorithm (Addition base 10)

1. *Set **maxNumberOfDigits** to the larger number of digits.*
2. *For each digit position **i**, starting at position **0**:*
2.1. *- Let **topDigit** and **bottomDigit** be the two digits in **i**th position. If smaller number has no digit at the position, set its digit to **0**.*
2.2. *- Set **digitSum** to **topDigit** + **bottomDigit**.*
2.3. *- If **digitSum** ≥ **10**, set **resultDigit** = **digitSum** − **10** and **carryOver** = **1**.*
   *- Else **digitSum** < **10**, so set **resultDigit** = **digitSum** and **carryOver** = **0**.*
2.4. *- Set the result's **i**th digit to **resultDigit**.*
3. *If after last step **carryOver** is **1**, set **1** as the result's (**maxNumberOfDigits** + **1**)th digit.*