# **ADDITION WITHIN 1000**

# A WHAT IS ADDITION?

## A.1 ADDING NUMBERS WITHIN 20

Ex 1:

$$4 + 7 = \boxed{11}$$

Answer:

• 
$$4+7 = 4+6+1$$
  
=  $10+1$   
=  $11$ 

Ex 2:

$$5 + 7 = \boxed{12}$$

Answer:

• 
$$5 + 7 = 5 + 5 + 2$$
  
=  $10 + 2$   
=  $12$ 

Ex 3:

$$9 + 4 = \boxed{13}$$

Answer:

• 
$$9 + 4 = 9 + 1 + 3$$
  
=  $10 + 3$   
=  $13$ 

Ex 4:

$$4 + 9 = \boxed{13}$$

Answer:

$$+ 4 + 9 = 4 + 6 + 3$$

$$= 10 + 3$$

$$= 13$$

Ex 5:

$$8 + 7 = \boxed{15}$$

Answer:

= 15

Ex 6:

$$9 + 9 = 18$$

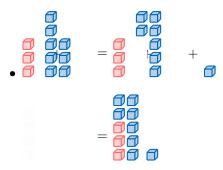
Answer:

• 
$$9 + 9 = 9 + 1 + 8$$
  
=  $10 + 8$   
=  $18$ 

#### Ex 7:

$$\frac{3}{1} + 8 = \boxed{11}$$

Answer:



• 
$$3 + 8 = 3 + 7 + 1$$
  
=  $10 + 1$   
=  $11$ 

#### Ex 8:

$$7 + 8 = \boxed{15}$$

Answer:

• 
$$7 + 8 = 7 + 3 + 5$$
  
=  $10 + 5$   
=  $15$ 

#### Ex 9:

$$7 + 4 = \boxed{11}$$

Answer:

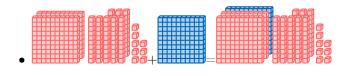
• 
$$7 + 4 = 7 + 3 + 1$$
  
=  $10 + 1$   
=  $11$ 

## **A.2 ADDING 100**

#### Ex 10:

$$288 + 100 = 388$$

Answer:

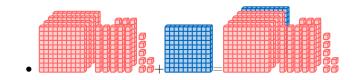


• 288 + 100 = 388

## Ex 11:

$$487 + 100 = 587$$

Answer:

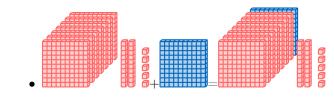


• 487 + 100 = 587

## Ex 12:

$$725 + 100 = 825$$

Answer:

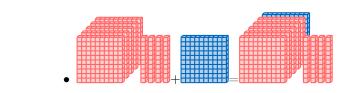


• 725 + 100 = 825

## Ex 13:

$$540 + 100 = 640$$

Answer:



• 540 + 100 = 640

# **B ADDING IN COLUMNS**

# **B.1 ADDING UP TO 1000 WITHOUT REGROUPING**

Ex 14: On your paper, set up a column addition:

$$130 + 123 = 253$$

Answer:

• Set up the addition:

$$\begin{array}{c} 1 \ 3 \ 0 \\ + \ 1 \ 2 \ 3 \end{array}$$

• Add the ones: 0 + 3 = 3

$$\begin{array}{r} 1 & 3 & 0 \\ + & 1 & 2 & 3 \\ \hline & & & 3 \end{array}$$

• Add the tens: 3 + 2 = 5

$$\begin{array}{r} 1 \ 3 \ 0 \\ + \ 1 \ 2 \ 3 \\ \hline 5 \ 3 \end{array}$$

• Add the hundreds: 1 + 1 = 2

$$\begin{array}{r} 1 \ 3 \ 0 \\ + \ 1 \ 2 \ 3 \\ \hline 2 \ 5 \ 3 \end{array}$$

• So, 130 + 123 = 253

Ex 15: On your paper, set up a column addition:

$$346 + 232 = 578$$

Answer:

• Set up the addition:

$$\begin{array}{c} 3 \ 4 \ 6 \\ + \ 2 \ 3 \ 2 \end{array}$$

• Add the ones: 6 + 2 = 8

$$\begin{array}{r} 3 & 4 & 6 \\ + & 2 & 3 & 2 \\ \hline & & 8 \end{array}$$

• Add the tens: 4 + 3 = 7

$$\begin{array}{r} 3 & 4 & 6 \\ + & 2 & 3 & 2 \\ \hline & 7 & 8 \end{array}$$

• Add the hundreds: 3 + 2 = 5

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

• So, 346 + 232 = 578

Ex 16: On your paper, set up a column addition:

$$460 + 137 = 597$$

Answer:

• Set up the addition:

$$\begin{array}{c} 4 \ 6 \ 0 \\ + \ 1 \ 3 \ 7 \end{array}$$

• Add the ones: 0 + 7 = 7

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

• Add the tens: 6 + 3 = 9

$$\begin{array}{r} 4 & 6 & 0 \\ + & 1 & 3 & 7 \\ \hline & 9 & 7 \end{array}$$

• Add the hundreds: 4 + 1 = 5

$$\begin{array}{r} 4 & 6 & 0 \\ + & 1 & 3 & 7 \\ \hline & 5 & 9 & 7 \end{array}$$

• So, 460 + 137 = 597

Ex 17: On your paper, set up a column addition:

$$373 + 25 = 398$$

Answer:

• Set up the addition:

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

• Add the ones: 3 + 5 = 8

$$\begin{array}{r}
 373 \\
 + 25 \\
 \hline
 8
 \end{array}$$

• Add the tens: 7 + 2 = 9

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

• Add the hundreds: 3 + 0 = 3

$$\begin{array}{r}
 373 \\
 + 25 \\
 \hline
 398
 \end{array}$$

• So, 373 + 25 = 398

Ex 18: On your paper, set up a column addition:

$$43 + 316 = 359$$

Answer:

• Set up the addition:

$$\begin{array}{r} 4 \ 3 \\ + 3 \ 1 \ 6 \end{array}$$

• Add the ones: 3 + 6 = 9

$$\begin{array}{r}
 43 \\
 +316 \\
 \hline
 9
 \end{array}$$

• Add the tens: 4 + 1 = 5

$$\begin{array}{r} 4 \ 3 \\ + \ 3 \ 1 \ 6 \\ \hline 5 \ 9 \end{array}$$

• Add the hundreds: 0 + 3 = 3

$$43 \\ + 316 \\ \hline 359$$

• So, 43 + 316 = 359

# B.2 ADDING NUMBERS UP TO 1000 WITH ONE CARRYOVER

Ex 19: On your paper, set up a column addition:

$$130 + 183 = 313$$

Answer:

• Set up the addition:

$$\begin{array}{c} 1 \ 3 \ 0 \\ + \ 1 \ 8 \ 3 \end{array}$$

• Add the ones: 0 + 3 = 3

$$\begin{array}{r} 1 \ 3 \ 0 \\ + \ 1 \ 8 \ 3 \\ \hline 3 \end{array}$$

• Add the tens: 3+8=11 (1 carried to the hundreds column)

$$\begin{array}{r}
 1 \\
 1 \\
 3 \\
 \hline
 1 \\
 8 \\
 \hline
 1 \\
 3
\end{array}$$

• Add the hundreds: 1+1+1=3

$$\begin{array}{c} {1} \\ {1\ 3\ 0} \\ {+\ 1\ 8\ 3} \\ \hline {3\ 1\ 3} \end{array}$$

• So, 130 + 183 = 313

Ex 20: On your paper, set up a column addition:

$$262 + 386 = 648$$

Answer:

• Set up the addition:

$$\begin{array}{r}
2 & 6 & 2 \\
+ & 3 & 8 & 6
\end{array}$$

• Add the ones: 2 + 6 = 8

$$\begin{array}{r}
2 & 6 & 2 \\
+ & 3 & 8 & 6 \\
\hline
8
\end{array}$$

• Add the tens: 6+8=14 (1 carried to the hundreds column)

$$\begin{array}{r}
1 \\
2 & 6 & 2 \\
+ & 3 & 8 & 6 \\
\hline
4 & 8 & 8
\end{array}$$

• Add the hundreds: 1 + 2 + 3 = 6

$$\begin{array}{c}
1 \\
2 6 2 \\
+3 8 6 \\
\hline
6 4 8
\end{array}$$

• So, 262 + 386 = 648

Ex 21: On your paper, set up a column addition:

$$136 + 244 = 380$$

Answer:

• Set up the addition:

$$\begin{array}{c} 1 \ 3 \ 6 \\ + \ 2 \ 4 \ 4 \end{array}$$

• Add the ones: 6 + 4 = 10 (1 carried to the tens column)

$$\begin{array}{r}
1 \\
1 \\
3 \\
6 \\
+2 \\
4 \\
4 \\
0
\end{array}$$

• Add the tens: 1 + 3 + 4 = 8

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

• Add the hundreds: 1 + 2 = 3

$$\begin{array}{r}
 1 \\
 1 \\
 3 \\
 \hline
 4 \\
 \hline
 3 \\
 8 \\
 \hline
 \end{array}$$

• So, 136 + 244 = 380

Ex 22: On your paper, set up a column addition:

$$38 + 657 = 695$$

Answer:

• Set up the addition:

$$\begin{array}{c} 3 \ 8 \\ + \ 6 \ 5 \ 7 \end{array}$$

• Add the ones: 8 + 7 = 15 (1 carried to the tens column)

$$\begin{array}{r} 1 \\ 38 \\ +657 \\ \hline 5 \end{array}$$

• Add the tens: 1 + 3 + 5 = 9

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

• Add the hundreds: 0 + 6 = 6

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

• So, 38 + 657 = 695

Ex 23: On your paper, set up a column addition:

$$390 + 597 = 987$$

Answer:

 $\bullet\,$  Set up the addition:

$$\begin{array}{r} 3 \ 9 \ 0 \\ + \ 5 \ 9 \ 7 \end{array}$$

• Add the ones: 0 + 7 = 7

$$\begin{array}{r}
 390 \\
 +597 \\
 \hline
 7
 \end{array}$$

• Add the tens: 9+9=18 (1 carried to the hundreds column)

$$\begin{array}{r}
 3 9 0 \\
 + 5 9 7 \\
 \hline
 8 7
 \end{array}$$

• Add the hundreds: 1 + 3 + 5 = 9

$$\begin{array}{c}
 1 \\
 3 9 0 \\
 + 5 9 7 \\
 \hline
 9 8 7
\end{array}$$

• So, 390 + 597 = 987

# B.3 ADDING NUMBERS UP TO 1000 WITH TWO CARRYOVERS

 $\mathbf{Ex}$  24: On your paper, set up a column addition:

$$146 + 155 = 301$$

Answer:

• Set up the addition:

$$\begin{array}{r} 1 \ 4 \ 6 \\ + \ 1 \ 5 \ 5 \end{array}$$

• Add the ones: 6 + 5 = 11 (1 carried to the tens column)

$$\begin{array}{c} & 1 \\ 1 & 4 & 6 \\ + & 1 & 5 & 5 \\ \hline & & 1 \end{array}$$

• Add the tens: 1 + 4 + 5 = 10 (1 carried to the hundreds column)

$$\begin{array}{c}
 1 & 1 \\
 1 & 4 & 6 \\
 + 1 & 5 & 5 \\
 \hline
 0 & 1
\end{array}$$

• Add the hundreds: 1+1+1=3

$$\begin{array}{c} 1 & 1 \\ 1 & 4 & 6 \\ + & 1 & 5 & 5 \\ \hline 3 & 0 & 1 \end{array}$$

• So, 146 + 155 = 301

Ex 25: On your paper, set up a column addition:

$$389 + 462 = 851$$

Answer:

• Set up the addition:

$$\begin{array}{r} 3 & 8 & 9 \\ + & 4 & 6 & 2 \end{array}$$

• Add the ones: 9 + 2 = 11 (1 carried to the tens column)

$$\begin{array}{r}
 1 \\
 3 8 9 \\
 + 4 6 2 \\
 \hline
 1
\end{array}$$

• Add the tens: 1 + 8 + 6 = 15 (1 carried to the hundreds column)

$$\begin{array}{c} 1 & 1 \\ 3 & 8 & 9 \\ + & 4 & 6 & 2 \\ \hline & 5 & 1 \end{array}$$

• Add the hundreds: 1 + 3 + 4 = 8

$$\begin{array}{c} 1 & 1 \\ 3 & 8 & 9 \\ + & 4 & 6 & 2 \\ \hline 8 & 5 & 1 \end{array}$$

• So, 389 + 462 = 851

Ex 26: On your paper, set up a column addition:

$$326 + 189 = 515$$

Answer:

• Set up the addition:

$$\begin{array}{r} 3 \ 2 \ 6 \\ + \ 1 \ 8 \ 9 \end{array}$$

• Add the ones: 6 + 9 = 15 (1 carried to the tens column)

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

• Add the tens: 1 + 2 + 8 = 11 (1 carried to the hundreds column)

$$\begin{array}{r}
 3 & 2 & 6 \\
 \hline
 4 & 1 & 8 & 9 \\
 \hline
 1 & 5 & 5
\end{array}$$

• Add the hundreds: 1+3+1=5

$$\begin{array}{c}
1 & 1 \\
3 & 2 & 6 \\
+ & 1 & 8 & 9 \\
\hline
5 & 1 & 5
\end{array}$$

• So, 326 + 189 = 515

Ex 27: On your paper, set up a column addition:

$$373 + 89 = 462$$

Answer:

• Set up the addition:

$$\begin{array}{r}
 373 \\
 +89
 \end{array}$$

• Add the ones: 3 + 9 = 12 (1 carried to the tens column)

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

• Add the tens: 1 + 7 + 8 = 16 (1 carried to the hundreds column)

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

• Add the hundreds: 1 + 3 = 4

$$\begin{array}{r}
 1 & 1 \\
 3 & 7 & 3 \\
 + & 8 & 9 \\
 \hline
 4 & 6 & 2
 \end{array}$$

• So, 373 + 89 = 462

Ex 28: On your paper, set up a column addition:

$$364 + 599 = 963$$

Answer:

• Set up the addition:

$$\begin{array}{c} 3 \ 6 \ 4 \\ + \ 5 \ 9 \ 9 \end{array}$$

• Add the ones: 4 + 9 = 13 (1 carried to the tens column)

$$\begin{array}{r}
 1 \\
 3 6 4 \\
 + 5 9 9 \\
 \hline
 3
\end{array}$$

• Add the tens: 1 + 6 + 9 = 16 (1 carried to the hundreds column)

$$\begin{array}{r}
 1 & 1 \\
 3 & 6 & 4 \\
 +5 & 9 & 9 \\
 \hline
 6 & 3
\end{array}$$

• Add the hundreds: 1 + 3 + 5 = 9

$$\begin{array}{r}
1 & 1 \\
3 & 6 & 4 \\
+ & 5 & 9 & 9 \\
\hline
9 & 6 & 3
\end{array}$$

• So, 364 + 599 = 963

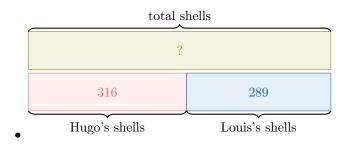
#### **B.4 SOLVING REAL-WORLD PROBLEMS**

Ex 29: Hugo and Louis are looking for shells. Hugo found 316 shells, and Louis found 289 shells.

How many shells do they have together in total?

Answer:

• To find the total number of shells, add the shells Hugo found and the shells Louis found.



• The column addition is:

$$\begin{array}{r}
 1 & 1 \\
 3 & 1 & 6 \\
 + 2 & 8 & 9 \\
 \hline
 6 & 0 & 5
\end{array}$$

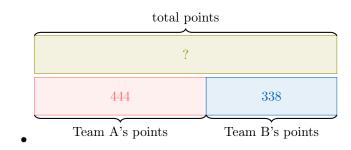
• The total number of shells is 316 + 289 = 605.

Ex 30: In a basketball match, Team A scored 444 points and Team B scored 338 points.

How many points did they score together in total?

Answer:

• To find the total points scored, add Team A's points and Team B's points.



• The column addition is:

$$\begin{array}{r}
 1 \\
 4 & 4 & 4 \\
 + 3 & 3 & 8 \\
 \hline
 7 & 8 & 2
\end{array}$$

• The total points scored is 444 + 338 = 782.

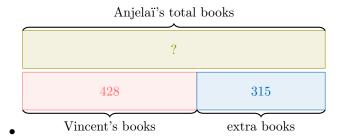
Ex 31: Anjelaï has read 315 more books than Vincent, who has read 428 books this year.

How many books has Anjelaï read in total?

Answer:

• To find the total number of books Anjelaï has read, add Vincent's books to the extra books Anjelaï read.





• The column addition is:

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

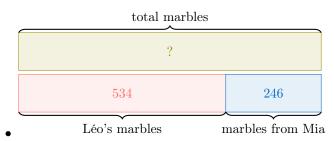
• The total number of books Anjelaï has read is 428 + 315 = 743.

 $\mathbf{Ex}$  32: Léo has 534 marbles, and his friend Mia gave him 246 more marbles.

How many marbles does Léo have in total?

Answer:

• To find the total number of marbles Léo has, add the marbles he already had to the marbles Mia gave him.



• The column addition is:

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

• The total number of marbles Léo has is 534 + 246 = 780.