

Remember to look at the key points of a learning unit before studying them in detail. Here you see this unit covers addition and subtraction. Carrying and borrowing are also important.



Unit 3 Adding and Subtracting Whole Numbers

1. Addition

$$\begin{array}{r} 4 \\ + 1 \\ \hline 5 \end{array} \quad \begin{array}{r} 34 \\ + 12 \\ \hline 46 \end{array} \quad \begin{array}{r} 333 \\ + 666 \\ \hline 999 \end{array}$$

Adding numbers with different places requires lining up the units column.

$$21 + 4 + 234$$

$$\begin{array}{r} 21 \\ + 4 \\ \hline 234 \\ \hline 259 \end{array}$$

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Carrying		
10's	100's	1,000's
1	1	1
17	111	2,767
+ 8	+ 97	+ 5,831
<hr/> 25	<hr/> 208	<hr/> 8,598

Sums larger than 9 require carrying one or more tens one place to the left. Sums larger than 99 require carrying one or more hundreds one place to the left, etc.

2. Subtraction

$$\begin{array}{r} 5 \\ - 1 \\ \hline 4 \end{array} \quad \begin{array}{r} 36 \\ - 2 \\ \hline 34 \end{array} \quad \begin{array}{r} 99 \\ - 66 \\ \hline 33 \end{array} \quad \begin{array}{r} 299 \\ - 88 \\ \hline 211 \end{array}$$

$$\begin{array}{r} 5 \\ - 1 \\ \hline 4 \end{array} \quad \begin{array}{l} \swarrow \\ \searrow \end{array} \quad 4 + 1 = 5$$

Check your answer by seeing if the answer plus the middle number equals the top number.

Borrowing

- A. Subtracting a larger number such as 8, from a smaller number such as 4, requires borrowing a ten from the place to the left.
- B. The place of the number being borrowed from determines the amount being borrowed.
- C. The number being borrowed from must be lowered by one.

$$\begin{array}{r} 10\text{'s} \\ 5 \ 14 \\ \cancel{5} \ 4 \\ - 3 \ 8 \\ \hline 2 \ 6 \end{array}$$

$$\begin{array}{r} 100\text{'s} \\ 4 \ 10 \\ \cancel{4} \ \cancel{0} \ 8 \\ - 1 \ 5 \ 5 \\ \hline 3 \ 5 \ 3 \end{array}$$

$$\begin{array}{r} 1,000\text{'s} \\ 7 \ 16 \\ \cancel{7} \ , \ \cancel{0} \ 3 \ 3 \\ - 5 \ , \ 8 \ 2 \ 1 \\ \hline 2 \ , \ 8 \ 1 \ 2 \end{array}$$