

Math Expressions

Unit 5 Study Guide

The goal for this unit is to have children grasp the concept of a new ten or a new hundred in 2-digit addition.

Our **Unit 5** assessment will be held on December 21, 2011.
Please study a little each night to be best prepared!

Students will understand place value for numbers to 200.

= 100
 |
 = 10
 ○ = 1

Drawing hundreds, sticks and circles to represent a number

187



194



Make sure you place your sticks and circles in groups of five as shown above!

Reverse the skill to determine a number and write it in words.

109One Hundred nine136One Hundred thirty six

Please note – we do not put the word “and” between the hundreds and tens/ones.

Students will add 2-digit numbers with or without a new ten and a new hundred.

Examples will be shown both horizontally and vertically. For those shown horizontally, students should first convert the problems to a vertical placement and then solve.

$$\begin{array}{r} \text{T} \quad \text{O} \\ 83 \\ + 6 \\ \hline 89 \end{array}$$

$$\begin{array}{r} 80 \\ + 10 \\ \hline \end{array}$$

$$\begin{array}{r} 60 \\ + 40 \\ \hline \end{array}$$

$$\begin{array}{r} \text{H} \quad \text{T} \quad \text{O} \\ 100 \\ 74 \\ + 26 \\ \hline 100 \end{array}$$

$$\begin{array}{r} 86 \\ + 47 \\ \hline \end{array}$$

$75 + 24 =$

$$\begin{array}{r} \text{T} \quad \text{O} \\ 75 \\ + 24 \\ \hline 99 \end{array}$$

$86 + 32 =$

$59 + 37 =$

$78 + 95 =$

Students should solve using the method they are most comfortable with. They have been introduced to various methods of solving these. Ask your child which method they use. An example of each follows:

Show all totals

$$\begin{array}{r} 74 \\ + 26 \\ \hline 10 \\ 90 \\ \hline 100 \end{array}$$

New Groups Below

$$\begin{array}{r} \text{T} \quad \text{O} \\ 74 \\ + 26 \\ \hline 100 \end{array}$$

New Groups Above

$$\begin{array}{r} \text{H} \quad \text{T} \quad \text{O} \\ 100 \\ 74 \\ + 26 \\ \hline 100 \end{array}$$

There will be an extended response question that will ask students to explain how they find the total of two numbers and prove their work with a proof drawing or show their work. A suggestion would be to do the math work first which may make it easier to explain the steps they took to arrive at an answer. Here is an example of how they might answer.

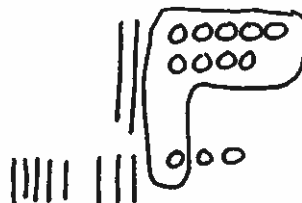
Explain how you find the total of 29 and 83.

First, I lined up the numbers vertically. I drew a line between the ones and tens to help me work accurately. Next, I labelled the columns with a T for tens and a O for ones. I added up the ones column. $9 + 3 = 12$. Using the groups above method, I placed a 2 in the ones column and placed the ten above the 2 in the tens column. Next I added the tens column, $1 + 2 + 8 = 11$. I placed the 11 in the tens column. Finally, I drew a line to show that I now had 1 hundred.

Then they should show accurately show their work in either a proof drawing or an equation.

$$\begin{array}{r} \text{H} \quad \text{T} \quad \text{O} \\ 100 \\ 29 \\ + 83 \\ \hline 112 \end{array}$$

OR



Students will fill in number sequences and write a rule to describe how the numbers are generated.

Continue each number sequence. Write the rule.

16, 24, 32, 40, 48, 56

$\begin{matrix} +8 \\ \diagdown \end{matrix}$
 $\begin{matrix} +8 \\ \diagdown \end{matrix}$
 $\begin{matrix} +8 \\ \diagdown \end{matrix}$
 $\begin{matrix} +8 \\ \diagdown \end{matrix}$
 $\begin{matrix} +8 \\ \diagdown \end{matrix}$

Rule n * + 8

48, 43, 36, _____, _____, _____

Rule n _____

26, 32, 38, _____, _____, _____

Rule n _____

57, 54, 51, _____, _____, _____

Rule n _____

Students should determine the rule first and write it in. Then use that information to complete the number sequence.

*Please note that the n means number. After students will in the rule it will read. The rule is number +8.