

# Math Tips for Parents

## Second Grade Module 1

### Sums and Differences to 20

In module 1, students fluently add one-digit to two-digit numbers at least through 100 using place value understanding, properties of operations, and the relationship between addition and subtraction

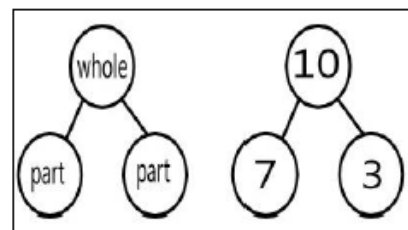
### Key Standards:

- Use addition and subtraction within 100 to solve one- and two-step word problems
- Apply properties of operations as strategies to add and subtract.
- Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
- Fluently add and subtract within 100 using strategies based on place value, properties of operations and/or the relationship between addition and subtraction.

Students will begin by using *ten-frame* cards. This is a ten-frame card. The card has 10 places to hold dots. This card only has 6 dots and we need 4 more to *make 10*.  $6 + 4 = 10$



### Number bonds

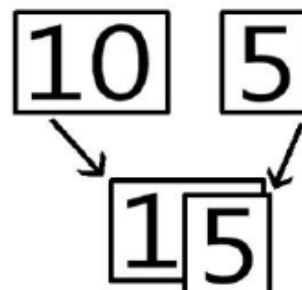


### Say Ten Counting

ten one = 11

ten two = 12

### Hide Zero Cards



**Rekenrek-** The Rekenrek is comprised of two strings of ten beads each, strategically broken into two groups: five red beads, and five white beads. Readily apparent in this model is an implicit invitation for children to think in groups of five and ten. As illustrated below, the strings of red and white beads (in groups of 5) provide a visual model that encourages young learners to subitize, i.e., to build numbers based on groups of five and ten.



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Jessie has a bag of marbles. There were 4 yellow marbles, 7 white marbles, and 3 blue marbles. How many marbles in all? Show your thinking using words, math drawings, or a number sentence.

$$\begin{array}{r} 4 + 7 + 3 = 14 \\ \quad \swarrow \quad \searrow \\ \quad 10 \\ 4 + 10 = 14 \end{array}$$

Looking at the addition sentence, we can make a 10 using 7 and 3. Then add 4 more.

Students will make ten and then add. Carson has 7 crayons at home and 8 at school. How many crayons does Carson have?

$$\begin{array}{r} 8 + 7 \\ \quad \quad \quad \wedge \\ \quad \quad \quad 2 \quad 5 \\ 10 + 5 = 15 \end{array}$$

**Carson has 15 crayons in all.**

## New Terms, Phrases, and Strategies in this Module:

**STRATEGY: Make ten and subtract from ten:** strategy in which students decompose a number in order to make a ten, thus using simpler, known facts to solve the problem,

e.g.,  $8+3=8+2+1$  and  $15-7=10-7+5=3+5$

**STRATEGY: Say Ten counting:**

e.g., 11 is "1 ten 1," 12 is "1 ten 2," twenty is "2 tens," 27 is "2 tens 7," 35 is "3 tens 5," 100 is "10 tens," 146 is "14 tens 6."

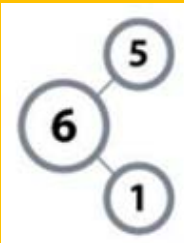
**Ten plus:** number sentences in which students automatically combine one addend with the group of 10 without having to count, e.g., for the number 6:

$5+1=6$

$1+5=6$

$6-1=5$

$6-5=1$



Make 10

Say Ten Counting

Rekenrek

Number Bond

Ten Frame

Hide Zero Cards

Label each sentence as true or false.

$$\begin{array}{r} 26 + 4 = 20 + 10 \quad \underline{\text{true}} \\ \quad \quad \quad \wedge \\ \quad \quad \quad 20 \quad 6 \end{array}$$
$$\begin{array}{r} 58 + 5 = 50 + 10 + 2 \quad \underline{\text{false}} \\ \quad \quad \quad \wedge \quad \quad \wedge \\ \quad \quad \quad 50 \quad 8 \quad 2 \quad 3 \end{array}$$

58 can be decomposed to 50 and 8. What number can we add to 8 to make 10? (2) Decompose 5 as 2 and 3.

To make this sentence true it should be:

$50 + 8 + 2 + 3 = 50 + 10 + 3$

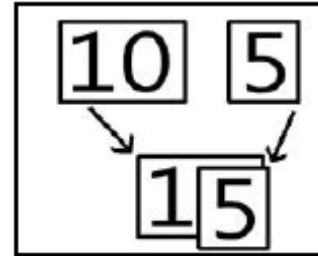
**To make 10 strategy** involves memorizing the number combinations that add to 10.

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$$\begin{array}{l} 3 + 7 = 10 \\ 13 + 7 = 20 \\ 23 + 7 = 30 \\ 83 + 7 = 90 \end{array}$$

The number pattern above shows the basic fact  $3+7$ . Each addition sentence has this basic fact within it. Talk to your child about this.

**Hide zero cards** are single digit and double digit number cards used to create a new number. Place the single digit card on top of the zero (hide the zero) to create a new double digit number:



## How you can help at home....

- Roll single digit numbers and add them together.
- Roll 2-digit or 3-digit numbers and add them together.
- Add all the digits of your house number together.
- Make a train with Legos or colored blocks. Write a number sentence for the different colors in the train.
- Represent two digit numbers with popsicle sticks—make bundles of ten for the tens and use single sticks for the ones. Add the piles together.
- Use small items (counters, beans, small toys) to represent number sentences. Use index cards to make  $+$ ,  $-$ ,  $<$ ,  $>$ , and  $=$  symbols. Show a number sentence with a missing element:  $7 + \underline{\quad} = 12$ . Have your student find the missing addend.