

**Standards:**

1.2.3 Show equivalent forms of the same number (up to 20) using objects, diagrams, and numbers.

**Objectives:**

1. The students will compare vertical and horizontal addition sentences.
2. The students will add two sums with manipulative tools and on paper.

**Assessments:**

1. The teacher will listen for accurate comparisons between vertical and horizontal math sentences.
2. The teacher will check the students' work for accuracy of addition.

**Materials:**

10 sticks of blue and red cubes (1 set/student)  
Student math packets chapter 2, clipboards, pencils  
Domino set  
White board/dry erase marker

**Description of Learning Activity:**

**Motivation/ Visual activity-** Model vertical addition with blue and red cubes. Have the students make 9 with blue and red cubes. Ask one student to explain their thinking and form an addition sentence (write on white board). Explain that last week we learned that the sum was the same no matter what order we put the numbers in. Ask: DO YOU THINK THE SUM WOULD BE THE SAME IF WE ADDED THIS WAY? (Write same addition sentence vertically) Explain vocabulary: horizontal (left to right) and vertical (top to bottom) -demonstrate with arms. Add cubes to determine if the sums are the same.

**Teach-** Explain that the bar in vertical addition means the same as an equal sign, and the sum is written under it. Show an example with a domino on the white board. Have the students count and say the addition sentence. Write the sentence vertically and horizontally on the white board. Explain the model problem on p. 23. Have the students count the dots on the left and right side of the domino and trace the numbers in the addition sentence to match. Explain that the first example is horizontal and the second is vertical. Ask: WHY IS THE SUM THE SAME BOTH WAYS? (same numbers)

**Practice-** p.23- practice together as a group. Students count the dots and write the numbers to match in the addition sentence. Ask: "HOW ARE THE PROBLEMS ALIKE/DIFFERENT IN EACH ROW? (same numbers and a plus sign/line instead of an equal sign)

**Apply-** p.24- model with the first two problems. Have the students draw dots next to the addition problem to represent each number. Have the students make sure their dots are small enough so that they don't get confused which dots are representing which numbers. Check readability.

**Closure-** Review lesson- TODAY WE LEARNED THAT THE SUM DOESN'T CHANGE IF WE ADD TWO NUMBERS HORIZONTALLY OR VERTICALLY AND WE PROVED THAT WITH DOMINOS AND CUBES. Students check their paper with a "teacher pen", circling ones they missed.