

## The Dot Game

### Materials:

- Dot game paper or reusable board (see illustration)
- Pencil and colored pencils (red, blue, green)

### Presentation:

1. Have the child help you gather the materials and bring them to a table. Say, “today we’re going to make a big, big, big, big sum!”
2. Write the numbers to be added in the right open column:

$$\begin{array}{r} 2846 \\ 8979 \\ + 7467 \\ \hline \end{array}$$

3. Count out the unit dots for the first number. Say, “let’s count out the spaces that make up all these units. We’ll start with the top number.”
4. Place a dot in each box that has been counted, starting on the left and going to the right. When you get to ten, just start in the next row on the right side of the column again.
5. Pick up the marking out of boxes where the last number left off, always starting from the farthest open box on the left side of the column for each category.
6. Do for the other number as well (7467).
7. When all counting is done say, “Let’s see how many units we have. First, let’s find a row in the units column that is full of dots. We’re going to cross it out and make a blue dot in the bottom box for each line we cross out.” Count the 10 together then draw the blue dot in the second from the bottom cell of the units column.
8. Write the number you have left (2) in the bottom box of the units column.
9. Say, “now let’s see how many tens we have.” Start writing dots for each number as with the units.
10. When you’re done counting out dots say, “Wait! We have more tens to put in the tens column. Can you see where they are?” Help the child see the blue dots in the bottom of the units column. If you need to point right to it and look somewhere else (as if you’re not pointing to it) and then explain, “Remember that each of these blue dots is the same as 10 units, see? We have to move these blue dots up with the other dots in the tens column.” Draw the blue dot in the next available box in the 10s column.
11. Add up your tens and write the number (less than 10) in the bottom

box of the column. Carry the rows of ten as red dots.

12. Continue for the other columns until columns are counted and numbers written on the bottom. In the 100s column, the dots are green (carrying 1000), and in the 1000s, they are blue (carrying 10000).
13. When you're done, transcribe the sum from the bottom of the columns to beneath the equation and **tell your story**.
14. Clean up.

- Purpose:**
1. To illustrate the mechanisms of the decimal system (that ten of each category make one of the next category)
  2. To focus the child's attention on the mechanism of carrying
  3. To prepare the child for abstract addition

**Control of Error:** The directress (focus on concept, not exactness of the result)

**Age:** 5 ½ years and above