# Georgia Tech

# CSI: MATHEMATICS
## Curriculum Support Information
### A mathematics resource for parents, teachers, and students

GEORGIA
DEPARTMENT OF
EDUCATION
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## Place Value, Money, and Estimation

### Students will:
- Use base ten blocks, diagrams, and number sentences to represent numbers up to 100.
- Write numbers in expanded form (327=300+20+7) using words and numerals
- Know a digit's place and value when given a number (567: the six is in the tens place and has a value of 60)
- Count with pennies, nickels, dimes, quarters and dollar bills
- Make fair trades and count back change from a given amount of money

### Classroom Cases:

1. Use base ten blocks to show the number 112.

**Case Closed - Evidence:**



or
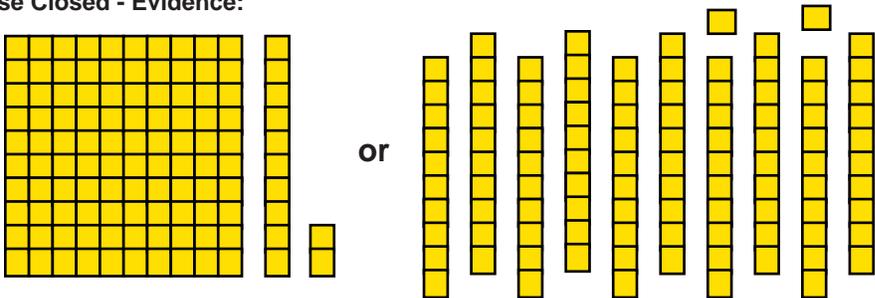
2. Write "243" two different ways

**Case Closed - Evidence:**

200 + 40 +3 = 243

100 + 100 + 40 + 3 = 243

3. You want to buy a balloon that costs $.65. You have $1.00. Use coins to count back the change you get. Show the amount requiring the fewest coins and one other way.



**Case Closed - Evidence:**

1 dime, 1 quarter; 3 dimes, and 1 nickel

### Clues:

When asked the value of the underlined digit in 5<u>6</u>2, your child may answer "tens" or "6 tens" rather than 60. "Tens" is the name of the place; 60 or "6 tens" tells the value. Children may recognize only one side of a coin.

Children often do not make the connection between "counting up" or "adding on" and counting back change. 10 + 3 would be 10, 11, 12, 13. Counting back change to $1.00 for something that costs 88¢ would be 89, 90, $1.00, that is, 2 pennies and 1 dime to make a dollar.

### Book 'em:

**If You Made a Million** by David M. Schwartz
**Alexander, Who Used to Be Rich Last Sunday** by Judith Viorst
**Benny's Pennies** by Pat Brisson
**A Chair for My Mother** by Vera Williams
**How the Second Grade Got $8,205.50 to Visit the Statue of Liberty** by Nathan Zimelman

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### Further investigations:

Let your child count the change from your pockets or change purse.

Give your child play money and coins to go play shopping. Take turns being the sales clerk and customer. Model how to count back change to $1.00.

Give your child a budget of $2 or $3. Ask him to "spend" the money by estimating the prices of items in newspaper advertisements.
The goal is to get as close to the budgeted amount as possible without going over.

Encourage your child to practice skip counting by 2's, 5's, 10's, and 25's.

Ask your child to draw a picture using circles, squares, triangles, and rectangles. You assign each shape a monetary value (1¢, 5¢, 10¢, 25¢), and ask your child to add the values to find out how much her picture is worth.

### Terminology:

**Digit:** A symbol used to write a number (0, 1, 2, 3, 4, 5, 6, 7, 8, and 9)

**Place Value:** The value a digit has because of its position in a number

### Related Files:
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