**Standards addressed by these problems: 2.MD.8, 2.OA.1, 2.NBT.5, 2.NBT.8**

Overall purpose of these problem types: Students will use their **understanding of addition and subtraction operations and base ten understanding to solve problems involving dollar bills, quarters, dimes, nickels, and pennies, using the $ and ¢ symbols appropriately.** Possible problems to be used to address are PPW-WU, JRU, JCU, JSU, SRU, SCU, and SSU.

*(NOTE: Any of these problems can be used as a pre/post test or ongoing assessment of students’ understanding.)*

**PPW-WU (Part-Part-Whole, Whole Unknown):**

Kendra has 3 dimes. Cheryl has 2 nickels. How much money do they have all together?

Denise has 1 dime and 2 quarters. How much money does Denise have?

Haylee found 11¢ in her pocket. Inside her piggy bank, there was 95¢. How much money does Haylee have altogether?

**JRU (Join-Result Unknown):**

Angela has $3.00 in her piggy bank. She earned $2.50 this week for her allowance. How much money does Angela have altogether?

On Monday, the tooth fairy gave Jacob 2 quarters for his lost tooth. On Thursday, the tooth fairy gave Jacob 2 more quarters for another lost tooth. How many quarters does Jacob have now? How much money is that worth?

**JCU (Join-Change Unknown):**

Ben had 3 quarters and two pennies in his pocket. His parents gave him some more money. Now, Ben has $2.00. How much money did his parents give him?

**JSU (Join-Start Unknown):**

Matthew had some money in his wallet. For his birthday, he received $25.00. Now, Matthew has a total of $36.53. How much money did Matthew have in his wallet?

**SRU (Separate-Result Unknown):**

Maya had $3.00 in her purse. She bought a candy bar that cost 65¢ and a Dr. Pepper that cost $1.25. How much money does Maya have left?

**SCU (Separate-Change Unknown):**

Mrs. Hales wanted to get a Sprite from the vending machine. She had $2.50. After she bought the Sprite, she had $1.25 left. How much did the Sprite cost?

**SSU (Separate-Start Unknown):**

Elliott had some change in his pocket. He spent 15¢ on a pencil and 70¢ on a pack of paper. How much change did Elliot start with?

Adapted from: Carpenter, T. P., Fennema, E., Franke, M. L., Levi, L., & Empson, S.B., (1999). *Children’s Mathematics: Cognitively Guided Instruction.* Portsmouth*,* NH: Heinemann.