



2.MD.C SUSAN'S CHOICE

PERSONAL FINANCE BIG IDEAS TAUGHT IN THIS TASK:

- Opportunity Cost

TASK

Susan wanted to make a birthday card for her best friend but needed some art supplies.

- A. She emptied her piggy bank and found 1 quarter, 5 dimes, 3 nickels, and 8 pennies.



How much money did Susan find in her piggy bank? Show or explain how you know.

- B. Susan went to the store with her mother and saw a pack of stickers for 35¢ and a glitter pen for 60¢. Does Susan have enough money to buy both items to make her birthday card? Show or explain how you know.
- C. While Susan was at the store, she saw a ring that she would like to have herself. The ring costs 45¢. Can she still buy one or both of the other items?

COMMENTARY

The purpose of this task is to address the concept of opportunity cost through a real-world context involving money. In economics, resources are limited, but our wants are unlimited. Therefore, choices must be made. Every choice involves a cost. Your **opportunity cost** is the value of the next best alternative you gave up, or did not choose, when making a decision. To learn more about opportunity cost, visit econedLink.org.

Prior to this task, it would be helpful for students to have a basic understanding of decision making. The teacher can hold a discussion with students regarding opportunity cost by asking them what Susan is giving up if she buys the ring. Responses might include 45¢, the glitter pen, the stickers, or even the ability to make the card the way she wanted to. At this point, a grade-appropriate definition/explanation of opportunity cost could be discussed.

Second graders are ready to think about the ideas presented by the task, but depending on their reading level, the questions might be best presented verbally by the teacher before students are asked to work independently or in groups. Note that the numbers were carefully chosen so that the addition and subtraction they do is within 100 (2.OA.1) and the steps shown in finding these sums and differences reflect strategies based on place value and properties of operations (2.NBT.5). Also, students in second grade are asked to skip-count by 5's, 10's, and 100's (see 2.NBT.2) but have not yet formalized these ideas in terms of the concept of multiplication. As a result, the solution given shows a skip-counting approach; if this task were given to third graders, they would be more likely to naturally formulate the solution in terms of multiplication.

This task is part of a set collaboratively developed by *Money as You Learn*, an initiative inspired by recommendations of the President's Advisory Council on Financial Capability, and Illustrative Mathematics. Integrating essential financial literacy concepts into the teaching of the Common Core State Standards can strengthen teaching of the Common Core and expose students to knowledge and skills they need to become financially capable young adults. A mapping of essential personal finance concepts and skills against the Common Core State Standards as well as additional tasks and texts will be available at www.moneyasyoulearn.org. This task and additional personal finance-related mathematics tasks are available at www.illustrativemathematics.org and are tagged "financial literacy."

SOLUTION

- A. Susan found 1 quarter which is worth **25¢**. She also found 5 dimes which are worth

10, 20, 30, 40, 50

So the dimes are worth **50¢**.

She also found 3 nickels which are worth

5, 10, 15

So the nickels are worth **15¢**.

Her 8 pennies are worth **8¢**. All together she found:

$$\mathbf{25¢ + 50¢ + 15¢ + 8¢ =}$$

$$75¢ + 15¢ + 8¢ =$$

$$80¢ + 10¢ + 8¢ =$$

$$90¢ + 8¢ =$$

$$\mathbf{98¢}$$

(Students may add the values in many different ways; the way shown above is just one of them.)

- B. We can add the values of the two items to find their total cost:

$$35¢ + 60¢ =$$

$$90¢ + 5¢ =$$

$$\mathbf{95¢}$$

Since she has 98¢, she has enough money to buy both the the pack of stickers and the glitter pen.

- C. If Susan buys the ring, we know she can't buy both of the other items because together they cost 95¢ and she only has 98¢. If we subtract the cost of the ring from the money she has, we can see what (if anything) she can still buy:

$$98¢ - 45¢ =$$

$$(90¢ - 40¢) + (8¢ - 5¢) =$$

$$50¢ + 3¢ =$$

$$\mathbf{53¢}$$

left.

That is more than enough to buy the stickers, but not enough to buy the glitter pen.