

Sarah Buys A Scooter For \$67. 52 How Much Change Does Sarah Receive If She Gives The Cashier \$70

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Introduction

Purchasing items involves understanding how much money to give and how much change to expect in return. In this scenario, Sarah is buying a scooter priced at \$67.52 and plans to pay with a \$70 bill. The key question is: How much change will Sarah receive from the cashier? To answer this, we need to understand the basic principles of subtraction and currency handling. This article explores the process step-by-step, emphasizing calculation methods, currency denominations, and practical considerations in cash transactions.

Understanding the Transaction

The Price of the Scooter

The scooter costs exactly \$67.52. This amount includes dollars and cents, which are essential to calculating the change accurately. When dealing with currency, especially in cash transactions, it's important to consider both dollar bills and coins.

The Cash Given

Sarah gives the cashier a \$70 bill. This is a whole dollar amount, which simplifies the calculation since no cents are involved in the cash she provides.

Calculating the Change

The Basic Subtraction Method

The core calculation involves subtracting the total cost of the scooter from the amount of cash given:

- Amount Given: \$70.00
- Cost of Scooter: \$67.52

To find the change:

Change = Amount Given - Cost of Scooter

Using the numbers:

Change = \$70.00 - \$67.52

Performing the Subtraction Step-by-Step

Let's break down the subtraction process:

1. Align the numbers by decimal point:

```
  70.00
- 67.52
  ----
```

2. Subtract cents first:

- Borrow if necessary:

Since 0 (hundredths) is less than 52, we need to borrow 1 dollar (which is 100 cents) from the dollars column.

3. Borrowing process:

- The dollar amount reduces from 70 to 69.
- The cents become: 100 (from borrowed dollar) + 0 (original cents) = 100 cents.
- Now, subtract 52 cents from 100 cents: $100 - 52 = 48$ cents.

4. Subtract dollars:

- Now, subtract dollars: $69 - 67 = 2$ dollars.

5. Combine the results:

- Change = $\$2.00 + \$0.48 = \$2.48$

Therefore, Sarah receives \$2.48 in change.

Denominations of the Change

Breaking Down \$2.48

When receiving change, cashiers typically hand over bills and coins. The

change amount of \$2.48 can be given in various denominations:

- Dollars:
- 2 one-dollar bills
- Cents:
- 1 quarter (25¢)
- 2 dimes (10¢ each)
- 3 pennies (1¢ each)

Practical example:

- \$2.00 (two one-dollar bills)
- \$0.25 (quarter)
- \$0.10 (dime)
- \$0.10 (another dime)
- \$0.03 (3 pennies)

This combination makes up the total change of \$2.48.

Understanding Currency Handling and Practical Scenarios

Why Knowing Exact Change Matters

Understanding how to calculate exact change is important for both shoppers and cashiers. It ensures transactions are accurate, prevents errors, and maintains trust.

Common Currency Denominations

- Bills:
- \$1, \$5, \$10, \$20, \$50, \$100
- Coins:
- Penny (1¢)
- Nickel (5¢)
- Dime (10¢)
- Quarter (25¢)
- Half-dollar (50¢)
- Dollar coin

In this transaction, since Sarah paid with a \$70 bill, the change should be provided in manageable denominations, often favoring bills and coins that simplify the process.

Additional Considerations in Cash Transactions

Tax and Additional Fees

While this scenario assumes no tax or additional fees, in real-world situations, sales tax can affect the total amount owed. If tax were included, the calculation would need to account for the increased total.

Digital Payments vs. Cash

Though this example involves cash, many transactions now are digital, where change is not physically given but credited or debited electronically. However, understanding cash change calculations remains fundamental for cash-based transactions.

Practice Problems for Better Understanding

- What if Sarah pays with a \$100 bill? How much change does she get?
- If the scooter costs \$67.52 and Sarah pays with a \$70 bill, but the cashier only has quarters and dimes, how should the cashier give the change?
- How would the change differ if Sarah paid with a \$50 bill instead of \$70?

Conclusion

In conclusion, when Sarah purchases the scooter costing \$67.52 and pays with a \$70 bill, she receives \$2.48 in change. This calculation hinges on understanding basic subtraction with decimal numbers, familiarity with currency denominations, and practical handling of cash transactions. Accurate change calculation is essential for efficient and trustworthy commerce, ensuring both customers and merchants are satisfied with every transaction. Mastery of these fundamental skills not only simplifies everyday shopping but also builds a solid foundation for financial literacy.

Frequently Asked Questions

How much change does Sarah receive after paying

\$67.52 with \$70?

Sarah receives \$2.48 in change.

If Sarah pays \$70 for a scooter costing \$67.52, what is the total amount of change she gets back?

She gets back \$2.48.

Why is it important to know the change when purchasing a scooter for \$67.52 with a \$70 bill?

Knowing the change helps ensure the cashier gives the correct amount and helps the customer verify their payment.

What steps should Sarah take to calculate her change after paying \$70 for a \$67.52 scooter?

She should subtract the cost (\$67.52) from the amount paid (\$70), resulting in \$2.48 change.

If Sarah wants to double-check her change, what calculation should she perform?

She should subtract \$67.52 from \$70, confirming her change is \$2.48.

Additional Resources

Understanding the Cash Transaction: Sarah Buys a Scooter for \$67.52 and Receives Change from \$70

When engaging in everyday financial transactions, especially with cash, understanding the mechanics of change calculation is essential. This knowledge not only helps in managing personal finances but also in developing basic arithmetic skills that are vital in countless real-world scenarios. In this article, we explore a straightforward yet instructive example: Sarah purchasing a scooter worth \$67.52 and paying with a \$70 bill. We will analyze the calculation process, discuss the importance of precise change, and provide insights into handling cash transactions effectively.

The Context of the Transaction

Scenario Overview

Imagine Sarah has decided to purchase a new scooter. The cost of this scooter is explicitly stated as \$67.52, a price that reflects the product's value, taxes, or additional fees included in the total. Sarah approaches the cashier with a \$70 bill, intending to complete her purchase.

This scenario is typical in retail settings where customers pay with cash and expect to receive change. The key questions here are:

- How much money does Sarah give to the cashier?
- How much change will she receive back?
- Why is understanding this calculation important?

By analyzing these questions, we can gain a comprehensive understanding of simple cash transactions.

Breaking Down the Calculation of Change

Understanding the Basics

When a customer pays with cash, the amount of change received is calculated by subtracting the total purchase price from the amount paid. The basic formula is:

$\text{Change} = \text{Amount Paid} - \text{Purchase Price}$

In Sarah's case:

- Amount Paid: \$70.00
- Purchase Price: \$67.52

Applying the formula:

$\text{Change} = \$70.00 - \67.52

To perform this subtraction accurately, it's essential to understand the structure of currency and the importance of aligning decimal points.

Step-by-Step Calculation

Let's walk through the calculation step by step:

1. Align the decimal points:

```
  \ \ \
70.00
-67.52
  \ \ \
```

2. Subtract the hundredths place (2):

Since 0 (hundredths in \$70.00) is less than 52 (hundredths in \$67.52), we need to borrow from the tenths.

3. Borrowing process:

- Borrow 1 from the tenths place (which is 0 in \$70.00, but since the dollar amount is 70, the tenths are 0, so we must borrow from the dollars).
- Since the dollar amount is 70, we borrow 1 dollar (which equals 100 cents) to add to the hundredths.

4. Adjusting the numbers:

- The dollar amount decreases from 70 to 69.
- The cents in the "amount paid" become 100 cents + 0 cents = 100 cents.
- Now, subtract:
- Hundredths: $100 - 52 = 48$
- Tenths: 0 (after borrowing) - 5 = since $0 < 5$, borrow 1 from the dollars again, but since only 69 dollars remain, this is manageable.

5. Perform the subtraction:

- After proper borrowing, the calculation becomes:

```
  \ \ \
69.100
-67.52
  \ \ \
```

- Convert the amounts into cents for simplicity:

- $\$70.00 = 7000$ cents
- $\$67.52 = 6752$ cents

6. Convert to cents and subtract:

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  \ \ \
7000 cents - 6752 cents = 248 cents
  \ \ \
```

7. Convert back to dollars:

- 248 cents = \$2.48

Therefore, Sarah will receive \$2.48 in change.

The Importance of Precise Change in Retail Transactions

Why Accurate Change Matters

Providing correct change is fundamental in retail and customer service. Errors, whether intentional or accidental, can lead to financial discrepancies and erode trust. For customers like Sarah, receiving the right amount of change ensures fairness and satisfaction.

Key reasons include:

- Financial accuracy: Prevents cash discrepancies.
- Customer trust: Builds confidence in the retailer.
- Legal compliance: Ensures adherence to cash handling regulations.
- Operational efficiency: Simplifies cash register balancing.

Handling Cash with Care

To ensure precise change:

- Always double-check the calculation before handing over cash.
- Use a calculator if necessary, especially with complex amounts.
- Count out the change aloud to the customer.
- Keep an organized cash drawer to facilitate quick and accurate transactions.

Practical Tips for Cash Transactions

List of Best Practices:

- Know your denominations: Familiarize yourself with all bills and coins to facilitate quick change-making.
- Use mental math for simple transactions: Practice quick calculations for typical purchase amounts.
- Verify the amount tendered: Always confirm the amount given by the customer

matches what's intended.

- Count change in front of the customer: Transparency helps prevent disputes.
- Stay organized: Keep cash organized to avoid mistakes during transactions.

Additional Considerations in Cash Handling

Handling Overpayment or Underpayment

While Sarah's transaction involves an overpayment of only a few cents, larger discrepancies may occur, especially in busy retail environments. Staff should always:

- Politely verify amounts.
- Be aware of common counterfeit bills.
- Know procedures for handling discrepancies or disputes.

Digital Alternatives and Their Impact

With the rise of digital payment methods, cash transactions are decreasing in many areas. However, understanding cash handling remains vital for:

- Small businesses.
- Transactions in areas with limited digital infrastructure.
- Situations where cash remains the preferred payment method.

Conclusion: The Final Breakdown

In Sarah's case, the transaction is straightforward:

- Purchase Price: \$67.52
- Amount Paid: \$70.00
- Change Received: \$2.48

This calculation underscores the importance of understanding basic arithmetic in everyday life. By accurately calculating change, both customers and retailers ensure fair transactions, uphold trust, and maintain efficient business operations.

Summary

Step	Description	Result
1	Convert amounts to cents	7000 cents (for \$70), 6752 cents (for \$67.52)
2	Subtract	$7000 - 6752 = 248$ cents
3	Convert back to dollars	\$2.48

Mastering these simple calculations enhances financial literacy and ensures smooth, transparent transactions—skills that are invaluable in everyday life.

Final Thoughts

Whether you're a shopper, a retail worker, or simply interested in the mechanics of cash transactions, understanding how to compute and handle change is a fundamental skill. In Sarah's scenario, receiving \$2.48 back from a \$70 payment for a \$67.52 purchase exemplifies the practical application of basic arithmetic, emphasizing the importance of precision and attentiveness in financial exchanges.

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