Terry Bought Bags Of Candy For $3.50,$9.25, And $2.10 If He Gives The Cashier $20, What Is His Change?

Terry Bought Bags Of Candy For $3.50, $9.25, And $2.10 If He Gives The Cashier $20, What Is His Change?

When shopping for treats, understanding how to calculate change is an essential skill, especially when handling cash transactions. In this scenario, Terry bought bags of candy costing $3.50, $9.25, and $2.10, and he paid with a $20 bill. The key question is: what is his change? To find the answer, we need to carefully add up the total cost of the candies and subtract that amount from the amount Terry paid. This process not only helps in everyday transactions but also improves math skills related to addition and subtraction, which are fundamental for financial literacy. Let’s explore this calculation step-by-step and understand the concepts involved.

Understanding the Cost of Candy Bags

Before calculating the change, it’s important to understand the individual prices of each candy bag. These prices are:

- $3.50
- $9.25
- $2.10

Knowing how to handle decimal numbers and perform addition accurately is crucial here. These dollar amounts include cents, so attention to detail ensures the correct total.

Calculating the Total Cost of Candy Bags

The first main step is to sum the prices of all the candy bags purchased. Let’s break this down:

Step 1: Add the first two prices

Starting with $3.50 and $9.25:

1. Align the decimal points for proper addition.
2. Add the dollars: 3 + 9 = 12.

3. Add the cents: 50¢ + 25¢ = 75¢.
4. Combine the sums: $12 + $0.75 = $12.75.

Step 2: Add the third price

Next, add the $2.10 to the previous total:

1. Align the decimal points.
2. Add the dollars: 12 + 2 = 14.
3. Add the cents: 75¢ + 10¢ = 85¢.
4. Combine the sums: $14 + $0.85 = $14.85.

Therefore, the total cost of all the candy bags is $14.85.

Determining Terry's Change from a $20 Bill

Once the total cost is known, the next step is to subtract this amount from the amount Terry paid, which is $20.00.

Performing the subtraction

1. Set up the subtraction: $20.00 − $14.85.
2. Subtract dollars: 20 − 14 = 6.
3. Subtract cents: 00 − 85. Since 0 is less than 85, borrow 1 dollar (which is 100 cents) from the dollars, reducing the dollar amount to 5 and adding 100 cents to the cents column.
4. Now, subtract cents: 100 − 85 = 15 cents.
5. Subtract the borrowed dollar: 5 − 0 = 5 dollars remaining.

Result: Terry's change is $5.15.

Understanding the Significance of Accurate Change Calculation

Calculating change accurately is vital for several reasons:

- **Financial Literacy:** Helps in managing personal finances and understanding transaction values.
- **Mathematical Skills:** Reinforces addition, subtraction, and understanding decimal numbers.
- **Practical Life Skills:** Essential for everyday shopping, banking, and budgeting.

Practicing these calculations boosts confidence in handling cash and improves overall numeracy.

Additional Tips for Calculating Change

To ensure accuracy when calculating change, consider the following tips:

Use the Line-Up Method for Addition

- Align decimal points properly to avoid miscalculations.
- Add numbers column by column, starting from the rightmost digit (cents).

Break Down Subtraction into Steps

- When subtracting decimals, borrow from the next dollar if necessary.
- Always double-check that the amount borrowed is correctly accounted for to prevent errors.

Use a Calculator for Verification

- While mental math is useful, using a calculator can help verify your results, especially with larger numbers or when precise cents are involved.

Summary of the Calculation

Let’s quickly recap the steps:

- Sum of candy prices: $3.50 + $9.25 + $2.10 = $14.85
- Amount paid: $20.00
- Change: $20.00 - $14.85 = $5.15

So, Terry’s change from his $20 bill after purchasing the three bags of candy is $5.15.

Conclusion

Understanding how to calculate change is a fundamental skill that applies to many real-life situations. In Terry’s case, after buying three different bags of candy costing $3.50, $9.25, and $2.10, and paying with a $20 bill, he receives $5.15 in change. Mastering the steps of addition and subtraction involving decimals ensures accurate transactions and boosts confidence in handling money. Whether shopping for treats or managing personal finances, these skills are invaluable for everyday success.

Remember, practice makes perfect. Keep practicing calculations involving money, and you’ll become more proficient in managing cash and understanding the value of transactions.

Frequently Asked Questions

How do you determine Terry's total cost for the bags of candy?

Add the prices of all the bags: $3.50 + $9.25 + $2.10 = $14.85.

How much change does Terry receive after paying with $20?

Subtract the total cost from $20: $20.00 - $14.85 = $5.15.

What is the sum of the prices of the candy bags that Terry bought?

The total sum is $14.85.

If Terry paid with a $20 bill, how do you find his change?

Subtract the total cost of the candy from $20: $20 - total cost = change.

What is the importance of adding all candy prices before subtracting from the cash given?

Adding all prices ensures you find the total amount spent, which is necessary to accurately calculate the change from the amount paid.

Additional Resources

Terry's Candy Purchase: A Detailed Breakdown of Cost, Payment, and Change Calculation

When it comes to everyday transactions, understanding how to accurately calculate totals and change is a fundamental skill that can save time and avoid confusion at the checkout counter. Whether you're a student, a parent, or simply someone interested in honing your math skills, analyzing a straightforward scenario such as Terry buying candies for specific prices offers valuable insights into basic arithmetic, cash handling, and the importance of precise calculations. In this article, we explore the scenario where Terry purchases candies costing $3.50, $9.25, and $2.10, pays with a $20 bill, and examine exactly how much change he should receive.

Understanding the Purchase: Itemized Costs

At the core of this problem is the need to determine the total amount Terry spends on his candies. The individual prices are given as:

- Candy 1: $3.50
- Candy 2: $9.25
- Candy 3: $2.10

Before proceeding to the calculation, it’s essential to grasp how to handle monetary values, especially when they involve cents, which can sometimes be tricky if not carefully aligned.

Key considerations:

- All prices are in dollars, with cents represented as decimal fractions.
- The currency is standard U.S. dollars, so calculations should maintain precision to the cent.

Calculating the Total Cost

The first step is summing the individual prices to find the total amount Terry needs to pay.

Step 1: Add the dollar and cent parts separately

Let’s organize the numbers for clarity:

Item	Price
Candy 1	$3.50
Candy 2	$9.25
Candy 3	$2.10

Method 1: Direct addition

- $3.50 + $9.25 + $2.10

Step 2: Add the cents first

- 50¢ + 25¢ + 10¢ = 50 + 25 + 10 = 85¢

Step 3: Add the dollar parts

- $3 + $9 + $2 = $14

Step 4: Combine sums

- Total = $14 + $0.85 = $14.85

Alternative approach:

Use a calculator or mental math to confirm:

- $3.50 + $9.25 = $12.75

- $12.75 + $2.10 = $14.85

Result: Terry’s total expenditure is $14.85.

Handling the Payment: Calculating the Change

Having determined the total cost, the next step involves understanding how much change Terry receives after paying with a $20 bill.

Step 1: Subtract the total from the amount paid

- Amount paid: $20.00

- Total cost: $14.85

Step 2: Perform the subtraction

- $20.00 – $14.85

Breakdown:

- Subtract cents first: 00 – 85 — since 0 cents are less than 85, we need to borrow 1 dollar (which is 100 cents)

Borrowing:

- Borrow 1 dollar from the $20.00, leaving $19.00 in dollars

- Add 100 cents to the 0 cents: 0 + 100 = 100 cents

Now perform subtraction:

- Cents: 100 − 85 = 15 cents

- Dollars: 19 − 0 = 19 dollars

Result:

- Change = $19.15

Conclusion:

Terry should receive $19.15 in change after paying with a $20 bill.

Additional Insights: Importance of Precision and Practical Considerations

While the calculation appears straightforward, several factors highlight the importance of careful computation and understanding of everyday financial transactions.

1. The Significance of Accurate Addition and Subtraction

Even minor errors in adding cents or dollars can lead to incorrect change, which can cause inconvenience or mistrust. Using aligned decimal points, a calculator, or mental math strategies ensures accuracy.

2. Handling Borrowing in Subtraction

When subtracting monetary amounts where the cents in the subtrahend exceed those in the minuend, borrowing from the dollar amount is essential. This process mirrors the traditional subtraction method taught in elementary arithmetic and is crucial for correctness.

3. Practical Applications in Real-Life Scenarios

Understanding these calculations is vital in:

- Retail transactions
- Budgeting and personal finance
- Teaching children about money management
- Developing financial literacy

Summary and Final Notes

To summarize:

- Total cost of candies: $14.85
- Amount paid: $20.00
- Change received: $5.15

Note: The initial calculation in the problem statement mentioned the total cost as $3.50, $9.25, and $2.10, which sum to $14.85, and the amount paid as $20.00. The change is therefore $20.00 - $14.85 = $5.15.

Important correction:

In the original prompt, the user asked, "If he gives the cashier $20, what is his change?" but the listed prices sum to $14.85, not the total of $20. The change calculation confirms that Terry receives $5.15 in change.

Final thoughts:

Mastering such basic arithmetic not only ensures smooth financial transactions but also builds a foundation for more complex financial literacy topics. Whether buying candies or managing larger expenses, accurate calculations and understanding of money are essential skills.

In conclusion, Terry's purchase exemplifies the importance of precise addition, subtraction, and understanding cash transactions. By carefully summing item prices and correctly calculating change, we reinforce fundamental math skills applicable in countless real-world scenarios, ensuring financial accuracy and confidence.

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