

Haala Buys 13 Identical Shirts And 22 Identical Ties For 363.01 The Cost Of The Shirt Is 15.35 Find The

Haala Buys 13 Identical Shirts And 22 Identical Ties For 363.01 The Cost Of The Shirt Is 15.35 Find The problem is a classic example of applying basic algebra to real-world shopping scenarios. In this article, we will explore how to analyze such problems step-by-step, understand the underlying mathematical principles, and apply these skills to similar questions. Whether you're a student preparing for math exams or someone interested in shopping budget calculations, this guide will help you navigate through the thought process with clarity and confidence.

Understanding the Problem

Before diving into calculations, it's essential to break down the problem:

- Haala purchases 13 identical shirts and 22 identical ties.
- The total cost of all items is \$363.01.
- The cost of one shirt is \$15.35.
- The goal: Find the cost of one tie.

This problem involves basic arithmetic operations, particularly multiplication and subtraction, to determine the individual price of each item based on the total cost.

Breaking Down the Data

Let's organize the given information:

Item Type	Quantity	Cost per Item	Total Cost
Shirts	13	\$15.35	?
Ties	22	?	?
Total	-	-	\$363.01

Our primary knowns are:

- Number of shirts: 13
- Cost per shirt: \$15.35
- Total cost: \$363.01

What we need to find:

- Cost per tie

Calculating Total Cost of Shirts

The first step involves calculating the total cost of all shirts:

```
\[
\text{Total cost of shirts} = \text{Number of shirts} \times \text{Cost per shirt}
\]
```

Using the known values:

```
\[
13 \times 15.35
\]
```

Let's perform this multiplication carefully.

Multiplying 13 by 15.35

To multiply 13 by 15.35:

```
\[
13 \times 15.35
\]
```

Break down 15.35 into manageable parts:

```
\[
15 + 0.35
\]
```

Calculate:

```
- \((13 \times 15 = 195)\)
- \((13 \times 0.35 = 4.55)\)
```

Add the two results:

```
\[
195 + 4.55 = 199.55
\]
```

Total cost of shirts = \$199.55

Determining the Total Cost of Ties

With the total cost of shirts known, we can find the combined cost of all ties:

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\[
```

$$\text{Total cost of ties} = \text{Total cost} - \text{Total cost of shirts}$$

Substituting the known values:

$$\$363.01 - \$199.55 = \text{?}$$

Perform the subtraction:

$$363.01 - 199.55 = 163.46$$

Total cost of ties = \$163.46

Calculating the Cost of One Tie

Since all ties are identical, the cost per tie is:

$$\text{Cost per tie} = \frac{\text{Total cost of ties}}{\text{Number of ties}}$$

Plug in the numbers:

$$\frac{163.46}{22}$$

Now, perform the division:

Dividing 163.46 by 22

Estimate:

$$\begin{aligned} - & (22 \times 7 = 154) \\ - & (22 \times 8 = 176) \end{aligned}$$

Since 163.46 is between 154 and 176, the quotient is between 7 and 8.

Calculate:

$$163.46 - 154 = 9.46$$

Remaining:

$$[$$

```
9.46 \div 22 \approx 0.43  
\]
```

Adding this to 7:

```
\[  
7 + 0.43 = 7.43  
\]
```

Cost per tie $\approx$ \$7.43

Summary of Findings

- The total cost of 13 shirts at \$15.35 each is \$199.55.
- The combined cost of 22 ties is \$163.46.
- Each tie costs approximately \$7.43.

These calculations demonstrate how to approach multi-part problems involving total costs, individual item prices, and algebraic reasoning.

Additional Tips for Solving Similar Problems

- Organize Data Clearly: Create tables or lists to keep track of quantities, prices, and totals.
- Break Down Complex Operations: Use distributive property to split multiplication into simpler parts.
- Estimate Before Precise Calculation: Estimation helps verify if the answer makes sense.
- Use Algebra When Needed: For unknown item prices, set variables and form equations.

Practice Problems to Reinforce Learning

1. If Haala bought 10 shirts at \$20 each and the total spent was \$400, how much did she spend on ties if she bought 15 ties and spent a total of \$550?
2. A store sells 8 identical jackets for \$120 each and 12 identical hats for \$15 each. If the total purchase was \$1,320, what is the cost of each hat?
3. Sarah bought 5 pairs of shoes for \$50 each and 3 hats for \$20 each. She spent a total of \$310. Find the total cost spent on shoes and hats separately.

Conclusion

Understanding how to dissect and analyze shopping-related problems is a practical application of basic algebra. By carefully organizing data, performing step-by-step calculations, and verifying results, you can confidently solve questions involving total costs and individual item prices. This approach is not only useful for academic purposes but also enhances everyday decision-making and budgeting skills.

Final Thoughts

Whether you're dealing with similar shopping scenarios or complex algebraic equations, the key lies in methodical problem-solving. Remember to:

- Clearly define what is known and what needs to be found.
- Break down calculations into manageable steps.
- Use estimation to check for reasonableness.
- Practice regularly with diverse problems to strengthen your skills.

By mastering these techniques, you'll become more proficient in solving real-world math problems with confidence and ease.

Frequently Asked Questions

How much did Haala pay for each shirt when buying 13 shirts for a total of 363.01?

Each shirt cost approximately 15.35, which matches the total cost divided by the number of shirts ($363.01 \div 13 \approx 15.35$).

What is the total cost of 22 identical ties if each tie costs 15.35?

The total cost for 22 ties is $22 \times 15.35 = 337.70$.

If Haala bought 13 shirts and 22 ties for a total of 363.01, what is the combined cost of the ties and shirts?

The combined cost is 363.01, which includes both the shirts and ties.

What is the cost per tie if Haala bought 22 ties for a total of 363.01?

The cost per tie is approximately 16.50 ($363.01 \div 22 \approx 16.50$).

Are the shirts and ties priced equally based on the total cost and quantities?

No, since each shirt costs 15.35 and each tie costs approximately 16.50, their prices are slightly different.

How can we verify the total cost of the shirts and ties given the quantities and unit prices?

Calculate the total for shirts (13×15.35) and ties (22×16.50) and verify if their sum equals 363.01.

What is the total cost if Haala buys 13 shirts at 15.35 each and 22 ties at 16.50 each?

The total cost would be $(13 \times 15.35) + (22 \times 16.50) = 199.55 + 363.00 = 562.55$, which exceeds the given total, indicating different prices or a need to re-calculate based on the total 363.01.

Additional Resources

Haala Buys 13 Identical Shirts And 22 Identical Ties For 363.01 The Cost Of The Shirt Is 15.35 Find The — a seemingly straightforward transaction that opens up a broader discussion on bulk purchasing, cost analysis, and value optimization. In this review-oriented article, we will explore the intricate details of this purchase, analyze the associated costs, and evaluate the implications for consumers and retailers alike. Whether you're a clothing enthusiast, a budget-conscious shopper, or a business owner, understanding such transactions can yield valuable insights into effective purchasing strategies.

Understanding the Transaction: Breakdown of the Purchase

The initial step in dissecting this purchase involves understanding what exactly was bought and at what cost. Haala Buys acquired:

- 13 identical shirts
- 22 identical ties
- Total expenditure: \ \$363.01

The key data points provided are:

- Cost of each shirt: \ \$15.35

From this, we can determine the total amount spent on the shirts and analyze the remaining amount spent on the ties.

Calculating the Total Cost of Shirts

Given the number of shirts and the per-unit price:

- Total cost for shirts = 13 shirts × \$15.35 = \$199.55

This calculation confirms that Haala Buys spent \$199.55 on shirts alone.

Determining the Cost of Ties

Subtracting the shirts' total cost from the overall expenditure:

- Total spent on ties = \$363.01 - \$199.55 = \$163.46

Now, knowing the total spent on ties and the quantity purchased:

- Cost per tie = \$163.46 / 22 ≈ \$7.43

Summary of costs:

Item	Quantity	Cost per Item	Total Cost
Shirts	13	\$15.35	\$199.55
Ties	22	≈\$7.43	\$163.46
Total			\$363.01

This breakdown reveals that the shirts are priced significantly higher than the ties, which is typical given the materials and manufacturing costs associated with shirts versus ties.

Analyzing the Cost-Effectiveness of Bulk Purchasing

Bulk buying often leads to discounts and savings; however, the data provided does not specify whether the prices are discounted or standard retail prices. Still, analyzing the per-unit costs provides insights into the value of the purchase.

Per-Unit Cost Comparison

- Shirts: \$15.35 per shirt
- Ties: approximately \$7.43 per tie

In general, these prices are within typical retail ranges, but the real value hinges on the quality of the items and the context of the purchase (personal use vs. resale).

Potential Savings and Economies of Scale

- Buying in bulk can often secure discounts, but here the prices appear to be retail or close to retail prices.
- If discounts were applied, actual savings could be higher, but this data does not specify such details.

Implications for Consumers and Retailers

This purchase scenario offers valuable lessons for both consumers and retailers regarding pricing strategies, inventory management, and value assessment.

For Consumers

Pros:

- Cost Savings: Buying in bulk usually reduces the per-unit cost, providing economic benefits.
- Convenience: Acquiring multiple items at once saves time and repetitive shopping.
- Consistency: Identical shirts and ties ensure a uniform appearance, useful for uniforms or events.

Cons:

- Overstocking: Purchasing large quantities may lead to surplus if needs change.
- Storage: Bulk items require appropriate storage space.
- Potential for Obsolescence: Fashion trends or preferences might change, rendering some items less desirable.

For Retailers

Pros:

- Increased Sales Volume: Bulk purchases can boost overall sales figures.
- Inventory Management: Clear stock and manage inventory more efficiently.
- Customer Loyalty: Offering bulk deals can attract regular customers.

Cons:

- Pricing Pressure: Bulk discounts may reduce profit margins.
- Inventory Risk: Unsold bulk stock may lead to losses.
- Market Saturation: Excessive bulk sales to a single customer might limit future sales opportunities.

Cost Analysis and Price Strategy

Understanding how the costs are structured helps in devising effective pricing strategies and assessing market competitiveness.

Pricing Strategy Insights

- The shirt's per-unit price (\\$15.35) suggests a mid-range product.
- The ties, at approximately \\$7.43 each, are likely lower-cost accessories, possibly made from polyester or similar materials.

Features to consider:

- Material quality
- Brand reputation
- Design complexity

These factors influence both retail pricing and consumer perception.

Potential for Discounting

If the total purchase was part of a promotional offer or negotiated bulk rate, the actual per-unit costs could be lower. Such strategies benefit:

- Large-volume buyers
- Retailers aiming for high turnover
- Promotional campaigns encouraging bulk purchases

Market Context and Consumer Preferences

Understanding the broader market helps contextualize this purchase.

Fashion Trends and Market Demand

- Classic shirts and ties remain staples in formal and business attire.
- The choice of identical items suggests a preference for uniformity, perhaps for corporate uniforms or event staff.
- Price points indicate accessibility for average consumers or small business owners.

Quality vs. Cost

- Higher-priced shirts might indicate better fabric, durability, or brand prestige.
- Lower-cost ties could be fashion accessories or budget options.

Consumers should balance cost considerations with quality expectations, especially when purchasing items in large quantities.

Conclusion and Final Thoughts

The purchase of 13 identical shirts and 22 identical ties for \$363.01 exemplifies strategic bulk buying with a clear breakdown of costs. The per-unit prices suggest a balanced approach between affordability and quality, suitable for both personal use and business applications.

While the transaction appears straightforward, it underscores important principles:

- The importance of detailed cost analysis to ensure value.
- The benefits and risks associated with bulk purchasing.
- The need to understand market prices for effective decision-making.

Final Recommendations:

- Buyers should always compare per-unit costs across different suppliers to maximize savings.
- Consider the quality and longevity of items before opting for lower-cost options.
- Retailers can leverage such bulk transactions to strengthen customer loyalty and improve inventory turnover.

In essence, this purchase demonstrates how a simple data point can reveal broader insights about consumer behavior, pricing strategies, and market dynamics. Whether you're planning a similar bulk purchase or analyzing sales data, understanding these nuances can significantly enhance your decision-making process.

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