Using Decimals in a Shopping Context

Let's use what we know about decimals to make shopping decisions.

13.1 Party Supplies

Clare went to a store that sells a pack of paper plates for $3.25, a pack of napkins for $1.85, and disposable table covers for $0.99 each. She bought at least one of each item and spent no more than $10.



1. Could Clare have purchased 2 packs of paper plates, 2 packs of napkins, and 2 table covers? Explain your reasoning.

2. Could she have bought 1 pack of paper plates, 1 pack of napkins, and 5 table covers? Explain your reasoning.

13.2 Planning a Dinner Party

You are planning a dinner party with a budget of $50 and a menu that consists of 1 main dish, 2 side dishes, and 1 dessert. There will be 8 guests at your party.

Choose your menu items and decide on the quantities to buy so that you stay on budget. If you choose meat or poultry for your main dish, plan to buy 0.25 pound per person. If you choose fish, plan to buy 0.5 pound per person.

1. The budget is $ _____ per guest.

2. Use the worksheet to record your choices and estimated costs. Then find the estimated total cost and cost per person. See examples in the first two rows.

item	quantity needed	advertised price	estimated subtotal ($)	estimated cost per person ($)
example main dish: fish	4 pounds	$6.69 per pound	$4 \cdot 7 = 28$	$28 \div 8 = 3.50$
example dessert: cupcakes	8 cupcakes	$2.99 per 6 cupcakes	$2 \cdot 3 = 6$	$6 \div 8 = 0.75$
main dish:				
side dish 1:				
side dish 2:				
dessert:				
estimated total				

3. Is your estimated total close to your budget? If so, continue to the next question. If not, revise your menu choices until your estimated total is close to the budget.
4. Calculate the actual costs of the two most expensive items and add them. Show your reasoning.

Are you ready for more?

If you were to hold a dinner party for 1,000 people and serve the same menu items as you have chosen for 8 people, how would your budget for food and drinks change? What additional costs might you need to account for?

Lesson 13 Summary

We often use decimals when dealing with money. In these situations, sometimes we round and make estimates, and other times we calculate the numbers more precisely.

There are many different ways we can add, subtract, multiply, and divide decimals. When we perform these calculations, it is helpful to understand the meanings of the digits in a number and the properties of operations. In upcoming lessons, we will investigate how these understandings help us work with decimals.