Lesson 13: Using Decimals in a Shopping Context

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

13.1: Snacks from the Concession Stand

Clare went to a concession stand that sells pretzels for $3.25, drinks for $1.85, and bags of popcorn for $0.99 each. She bought at least one of each item and spent no more than $10.

1. Could Clare have purchased 2 pretzels, 2 drinks, and 2 bags of popcorn? Explain your reasoning.

2. Could she have bought 1 pretzel, 1 drink, and 5 bags of popcorn? 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 you stay on budget. If you choose meat, fish, or poultry for your main dish, plan to buy at least 0.5 pound per person.

1. The budget is $ _____ per guest.

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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.

5. How will you know if your total cost for all menu items will or will not exceed your budget? Is there a way to predict this without adding all the exact costs? Explain your reasoning.

Are you ready for more?

How much would it cost to plant the grass on a football field? Explain or show your reasoning.

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. We will investigate how these understandings help us work with decimals in upcoming lessons.

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