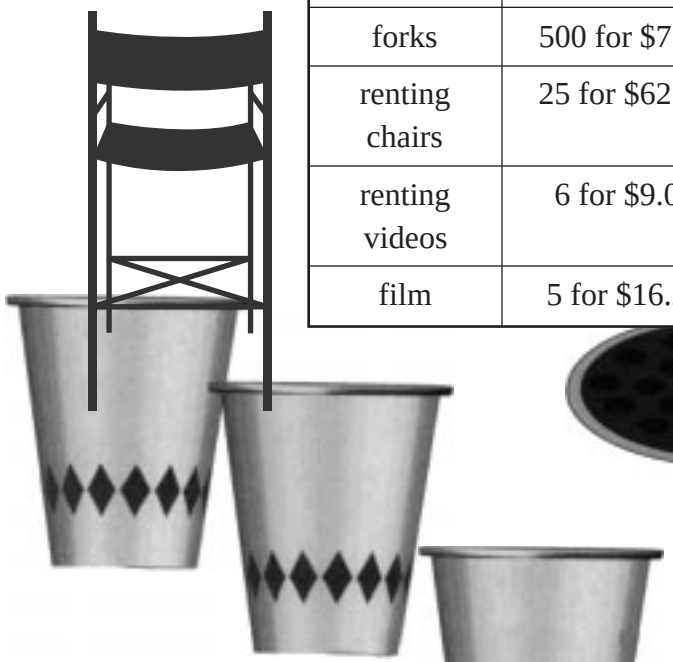
Name: _____ Date: _____

Keep It Down!

Unit Rates

Lyla is planning a party. She is trying to keep the cost down by comparing prices. She found that the best way to do this was to shop around, write down the prices of the items she needs, and then find the unit prices. The lowest unit price is the best buy. Can you help her find the best buy for each of the items listed below? (Hint: Use the FIX key to find the unit prices to the nearest cent. If necessary, use the FIX key again to increase the number of places to compare the unit prices.)

Item	Price 1	Price 2	Best Buy
cups	100 for $5.65	50 for $3.75	
plates	500 for $8.99	100 for $2.50	
napkins	1000 for $6.89	500 for $4.25	
forks	500 for $7.59	250 for $3.69	
renting chairs	25 for $62.50	15 for $33.75	
renting videos	6 for $9.00	5 for $7.75	
film	5 for $16.25	3 for $9.30	



Thinking Cap

Suppose Lyla always needs to buy the greatest number of items listed in each case. For example, she needs to buy five rolls of film. Does this mean that it is always best for her to buy the greater quantity? Explain your answer.

Keep It Down!

Topic: Finding Unit Rates and Comparing Prices

Objective: To use the calculator to find the unit rate.

NCTM Standards: Reasoning, Number and Number Relationships

Unit Rates

Using the Activity

Students use the calculator in this activity to find the unit rate.

- The FIX key can be used to fix the number of decimal places to 2.
- The ÷ key can be used to divide the numbers to find the unit rate.

Example To find the unit price of 100 cups for $5.65, enter FIX 2 to find the unit price to the nearest cent. Then enter 5.65 ÷ 100 = to find the unit price of $0.06. To find the unit price of 50 cups for $3.75, enter 3.75 ÷ 50 = . The unit price is $0.08. Note that the number of decimal places remains fixed at 2 until you change it. Since $0.06 is less than $0.08, 100 cups for $5.65 is the best buy.

Assessment Encourage students to check their answers by multiplying the unit price by the number of items. The answer should be approximately equal to the original price.

Answers

cups: See example.

Since the number of decimal places is fixed at 2, it is not necessary to use the FIX key again unless necessary.

plates: 8.99 ÷ 500 = 0.02, 2.5 ÷ 100 = 0.03; 500 plates for $8.99 is the best buy.

napkins: 6.89 ÷ 1000 = 0.01, 4.25 ÷ 500 = 0.01; Notice that these unit prices are the same. In order to compare them, the number of decimal places will need to be increased. To do this, enter FIX 7 and find the unit prices again. 6.89 ÷ 1000 = 0.0068900, 4.25 ÷ 500 = 0.0085000; 1000 napkins for $6.89 is the best buy.

forks: Enter FIX 2 to find the unit prices to the nearest cent. 7.59 ÷ 500 = 0.02, 3.69 ÷ 250 = 0.01; 250 forks for $3.69 is the best buy.

chairs: 62.5 ÷ 25 = 2.50, 33.75 ÷ 15 = 2.25; 15 chairs for $33.75 is the best buy.

videos: 9 ÷ 6 = 1.50, 7.75 ÷ 5 = 1.55; 6 videos for $9.00 is the best buy.

film: 16.25 ÷ 5 = 3.25, 9.3 ÷ 3 = 3.10; 3 rolls of film for $9.30 is the best buy.

Thinking Cap Answers

No, if the smaller quantity is the best buy, she can just buy more items at that price.