

LESSON
12•4

Product Testing

Some publications ask their readers to test many different kinds of products. The results of the tests are then published to help readers make wise buying decisions. One example is the former *Consumer Reports for Kids Online*. It featured articles previously published in *Zillions*, a child's version of *Consumer Reports*. In one test, 99 readers field tested several backpack models. The readers considered fit, back friendliness, and comfort as they tried to decide which brand was the best buy. In another test, a team of young people compared 40 brands of jeans in their search for a brand that would not shrink in length.

When a reader wrote to complain about a board game she bought, the staff sent board games to young people in every part of the country. Testers were asked to play each game several times and then to report what they liked and disliked about the game.

1. If you were testing a board game, what are some of the features you would look for?

2. When readers of the magazine tested backpacks, they considered fit, back friendliness, and comfort in determining the best one. Which of these factors is the most important to you? Why?

3. What is a **consumer**? Be prepared to share your definition with the class.

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Converting Units of Measure



$$1 \text{ pound (lb)} = 16 \text{ ounces (oz)}$$

$$1 \text{ ton (T)} = 2,000 \text{ pounds (lb)}$$

Complete the conversions between ounces, pounds, and tons.

Write the information you needed to make the conversion.

1. $5 \text{ lb} = \underline{\hspace{2cm}} \text{ oz}$ $1 \text{ lb} = 16 \text{ oz}$

2. $\frac{1}{2} \text{ lb} = \underline{\hspace{2cm}} \text{ oz}$

3. $129 \text{ lb} = \underline{\hspace{2cm}} \text{ oz}$

4. $2 \text{ T} = \underline{\hspace{2cm}} \text{ lb}$

5. $6\frac{1}{4} \text{ T} = \underline{\hspace{2cm}} \text{ lb}$

6. $112 \text{ oz} = \underline{\hspace{2cm}} \text{ lb}$

7. $20,000 \text{ lb} = \underline{\hspace{2cm}} \text{ T}$

8. $4,240 \text{ oz} = \underline{\hspace{2cm}} \text{ lb}$

9. $3,000 \text{ lb} = \underline{\hspace{2cm}} \text{ T}$

10. $1\frac{1}{4} \text{ lb} = \underline{\hspace{2cm}} \text{ oz}$

Complete the table.

11.

Ounces	Pounds	Tons
	10,000	
		9.5
16,000		

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Converting Units of Measure *continued*


12. Record measurement equivalents in the two-column tables below.

a.

Feet	Inches
1	12
2	
3	
4	
5	

b.

Liters	Milliliters
1	

c.

Minutes	Seconds
1	

Find the equivalent measures.

13. a. 6 km = _____ m

b. 2 L = _____ mL

c. 6 yd = _____ ft

d. 3.25 L = _____ mL

e. $5\frac{1}{2}$ kg = _____ g

f. $8\frac{1}{2}$ hr = _____ min

g. What do you notice when you convert from a larger unit to a smaller unit (such as from L to mL)?

14. a. 4,000 g = _____ kg

b. 200 cm = _____ m

c. 875 mL = _____ L

d. 660 sec = _____ min

e. 1,500 mL = _____ L

f. 156 in. = _____ ft

g. What do you notice when you convert from a smaller unit to a larger unit (such as from mL to L)?

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Unit Prices



Solve the unit price problems below. Complete the tables if it is helpful to do so.

1. A 12-ounce can of fruit juice costs 60 cents. The unit price is _____ per ounce.

Dollars				0.60
Ounces	1	3	6	12

2. A 4-pound bunch of bananas costs \$1.16. The unit price is _____ per pound.

Dollars				1.16
Pounds	1	2	3	4

3. A 5-pound bag of apples costs \$1.90. The unit price is _____ per pound.

Dollars					1.90
Pounds	1	2	3	4	5

4. Three pounds of salmon cost \$21.00.

- a. The unit price is _____ per pound.
- b. What is the cost of 7 pounds of salmon? _____
- c. What is the cost of $9\frac{1}{2}$ pounds of salmon? _____

Dollars			21.00			
Pounds	1	2	3	4	7	$9\frac{1}{2}$

Try This

5. *Energy* granola bars come in packages of 25 and cost \$3.50 per package. *Super* granola bars come in packages of 30 and cost \$3.60 per package. Which is the better buy? Explain.

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Unit Prices



Solve the unit price problems below. Complete the tables if it is helpful to do so.

1. A 12-oz bag of pretzels costs 96 cents. The unit price is _____ per ounce.

Dollars				0.96
Ounces	1	3	9	12

2. A package of 3 rolls of paper towels costs \$2.07. The unit price is _____ per roll.

Dollars			2.07
Rolls	1	2	3

3. A 4-liter bottle of water costs \$1.40. The unit price is _____ per liter.

Dollars				1.40
Liters	1	2	3	4

4. Choose 4 items from newspaper ads. In the table below, record the name, price, and quantity of each item. Leave the Unit Price column blank.

Item	Quantity	Price	Unit Price
Golden Sun Raisins	24 ounces	\$2.99	

Practice

Name the factor pairs for each number.

5. 12 _____

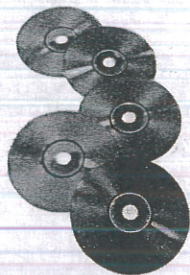
6. 50 _____

LESSON
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Party Town is having a summer stock-up sale. The ad below shows the original price of each item and the sale price if you buy a certain number of items. Use bills and coins to help you find the stock-up price per item.

1.

Party Music CDs

\$8.00 each

Stock-Up Price:
Buy 5 for \$25.00.

You pay \$5.00
per CD.

2.

String in a Can

\$3.00 each

Stock-Up Price:
Buy 8 for \$16.00.

You pay _____
per can.

3.

Mylar Balloon

\$1.99 each

Stock-Up Price:
Buy 12 for \$14.40.

You pay _____
per balloon.

4.

Piñata

\$14.99 each

Stock-Up Price:
Buy 3 for \$29.97.

You pay _____
per piñata.

5.

Glow bracelets

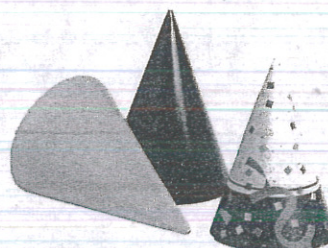
\$2.50 each

Stock-Up Price:
Buy 6 for \$10.50.

You pay _____
per bracelet.

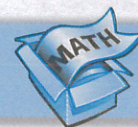
6.

Party Hats

\$9.99 for a package of 45

Stock-Up Price: Buy
4 packages for \$19.96.

You pay _____
per package.


LESSON
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Math Boxes

1. a. Complete the table.

Number of Inches		72		540
Number of Yards	1	2	9	12

- b. How many inches are in 329 yards?

_____ inches



2. Complete.

a. 7 gal = _____ qt

b. 8 L = _____ mL

c. _____ L = 250 mL

d. _____ gal _____ qt = 25 qt

e. _____ qt _____ pt = 14 c



3. Find the solution of each open sentence.

a. $t + 30 = -120$ $t =$ _____

b. $75 + n = 20$ $n =$ _____

c. $16 + b = 0$ $b =$ _____

d. $c + (-61) = -97$ $c =$ _____



4. Which one of the names below is *not* a name for 3.16? Fill in the circle next to the best answer.

(A) $4.8 - 1.64$

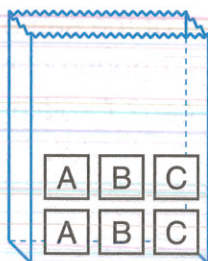
(B) $15.8 / 5$

(C) $2.47 * 6$

(D) $2.5 + 0.66$



5. Add blocks to the bag so it is likely that Arjan will pick a C block without looking.



6. Calculate.

a. 10% of 520 = _____

b. 5% of 180 = _____

c. 40% of _____ = 4

d. _____ % of 30 = 15

e. _____ % of 35 = 14

f. _____ % of 95 = 38

