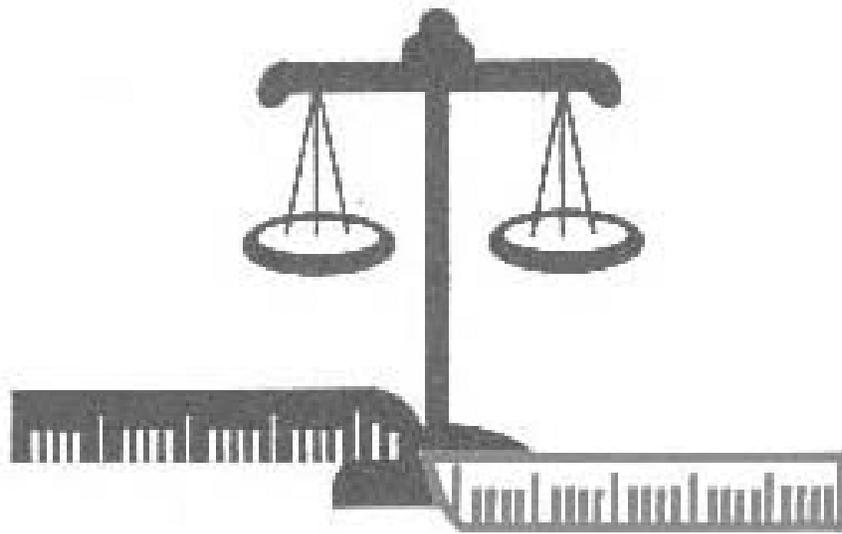


GETTING WHAT YOU PAY FOR

WEIGHTS AND MEASURES TIPS
FOR CONSUMERS



Getting What You Pay For...

Weights and Measures Tips for Consumers

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Getting What You Pay For...

It's hard to **be a smart consumer today**. You think about the products you buy and the amount you can spend. Can I afford this? Is this the best buy? Am I getting my money's worth?

Almost everything we buy is sold by **weight, volume, length, count, or measure**. Think of examples – **a dozen eggs, a gallon of milk, a liter of wine, a yard of cloth, a pound of hamburger, a cord of firewood**.

Without standard measurements, it would be difficult to do even simple things like use cookbooks or buy carpeting, laundry detergent, and fabric.

Keeping The Market in Balance...



You don't carry a scale or measuring tape with you to check the weight or measure of measure of everything you buy. How do you know you're getting what you pay for?

For hundreds of years, your **local weights and measures officials have been working behind the scenes to protect consumers, businesses, and manufacturers from unfair practices.**

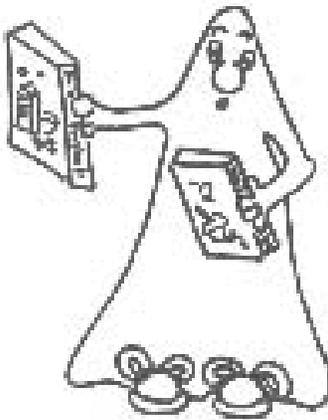
Weights and measures officials work in agriculture departments, consumer protection offices, and other state and local government agencies.

These men and women use highly accurate equipment to inspect scales, meters, scanning equipment, and packaged products at supermarkets. They also inspect weighing and measuring equipment and packages at warehouses, packing plants, feed mills, shipping companies, lumber yards, and gasoline stations. They act as a third party to help maintain fairness and keep the marketplace in balance.

Each state has a metrology laboratory which has a set of standard weights and measures. These are used to check the accuracy of the equipment used by weights and measures officials and industry

KNOW YOUR RIGHTS AND RESPONSIBILITIES...

Consumers have rights and responsibilities in the marketplace! This booklet offers you, the consumer, important ideas on how to use weights and measures information. **By knowing what to do, you, too, can help the market work at its best.**



Read The Label ...

Package labels give consumers helpful information. The amount of the product or the net quantity in the package is marked on the label. The quantity is shown as a weight, measure, or count, such as ounces, pounds, quarts, liters, or square feet.

Find the weight or measurement on the labels below.



ROAST BEEF		
NET WEIGHT	UNIT PRICE	TOTAL PRICE
1.00lb.	3.99	84.07

Pay only for the product. . . NOT THE PACKAGING. . .

When you buy apples in a plastic bag, **you should pay only for the weight of the apples.** If you buy potato salad at the deli counter, you should pay only for the salad, **not for the weight of the container.**

In many stores, the electronic or computerized scales used at the check-out counter are set to automatically deduct the weight of the packaging. On other scales, the sales clerk must adjust the scale to deduct the packaging materials.

Scales must be placed so you can see the weight. If you have a question, ask to have the package weighed again before you buy. Ask if the weight of the packaging has been deducted.

Weights and measures officials often visit store to inspect and weigh prepackaged products. They also check the accuracy of the scales being used.

WHAT YOU CAN DO:

Watch the scale and the amount registered. The scale should be placed so you can see the weight, price, and other information displayed.

Make sure the scale shows a zero or minus sign before anything is weighed. **Pay ONLY for the product, NOT for the packaging.**

If you have any questions about how a store weighs or measures products, **ask the manager for information** first. He or she should answer your questions.

If the problem is not resolved, contact your local weights and measures office for advice or assistance.

Compare Products and Prices... Use Unit Pricing...

Food is a large part of a family budget. To make the best choices and to get the most for your money, it is important to compare the price, amount, and quality of similar products.

Unit pricing can help. The **unit price** tells you the costs per “unit” (such as per ounce, per pound, per sheet) to buy the product.

It's easy to find the unit price of some items. It may be marked on a sign near the item. For example:

- If apples sell for \$.89 per pound, you know that 5 pounds will cost \$4.45 (5 pounds X 89 cents).
- If potato salad sells at the deli counter for \$2.59 per pound, you know that 2 pounds will cost \$5.18 (2 X \$2.59).

Unit pricing is most helpful when the price per unit isn't so clear. Let's look at an example.

Your favorite brand of corn flakes is sold in three different sizes.

The 14-ounce box is \$2.52.

The 20-ounce box is \$3.00.

The 2 pound (32-ounce) box is \$5.12.

Corn Flakes 32 oz.	Corn Flakes 20 oz.	Corn Flakes 14 oz.
-------------------------------------	-------------------------------------	-------------------------------------

Which one is the best buy? Unit pricing helps. (In this case, the unit price is the price per ounce).

To figure the unit price, divide the price by the number of units (in this example, it's the number of ounces).

- The **unit price** for the 14-ounce box is **18 cents** per ounce ($\$2.52/14$)
- The **unit price** for the 20-ounce box is **15 cents** per ounce ($\$3.00/20$)
- The **unit price** for the 2-pound box is **16 cents** per ounce (2 pounds = 32 ounces; $\$5.12/32$)

Compare the unit price of each package. **Which costs less per unit?**

In this example, the 20-ounce package is the best buy because it costs less per ounce.

Remember, the **larger package is not always the best buy. It pays to know the unit price.**

Corn flakes are also sold in the **bulk food** section for \$1.44 per pound (one pound = 16 ounces). Divide \$1.44 by 16 and you know the cost per ounce is 9 cents. ($\$1.44/16 = \$.09$)

How does the unit price of the boxed corn flakes compare with the unit price of the corn flakes sold in the bulk food section? In this example, the unit price shows that the corn flakes from the bulk food section are the better buy.

When you know the unit price, you can compare similar products of different sizes. Many states require supermarkets to mark the unit price on the shelves or the price tags. Other states may require that the information given be correct and easy to understand. If you find that a unit price label or tag is missing or is incorrect, report it to the store manager immediately.

Unit price labels may look like these:

UNIT PRICE PER LB. 2.59	YOU PAY \$2.59
A 0407 006 CANNED BEANS 16 OZ.	

UNIT PRICE PER LB. 1.80	YOU PAY \$.90
C 0607 806 PICKLES 8 OZ.	

What **YOU** can do:

Look for unit price labels on shelves or signs near the item.

Compare the unit prices of similar products to find the best buy.

If the unit price is incorrect or missing, **report it to the store manager**. Ask the manager to post or correct the unit price information.

If the problem is not resolved, **contact your local weights and measures office for help**.

A. Try another example of using unit pricing:

There are three different packages of lunch bags. The 25-bag package is \$1.50. The 75-bag package is \$3.00. The 125-bag package is \$3.75. What is the unit price for each? Which is the best buy? Look on page 23 for the answer.

Check the Price...

Many stores use electronic scanners to figure the price at the check-out counter. These scanners are linked to a computer that reads the price of the item. Some scanners are hand-held and the clerk runs the scanner over the price tag. Other scanners are on a counter and the items are passed over an electronic reading device. **The scanner reads a code on the product or the tag and the computer computes the price.**

Many **weights and measures officials inspect scanners to make sure you are charged the correct price.** If the scanners are inaccurate, consumers and businesses can both lose money.

What **YOU** can do:

Watch as the price of the item shows on the check-out register.

Ask the clerk to check the price if you think the scanned price is incorrect.

If the scanned price does not agree with the posted price, ask the store manager to correct it.

Save the cash register receipt in case you have questions or a problem later on.

If the problem is not resolved, **contact your local weights and measures office for help.**

When Buying Gasoline...

Good measurement is also important when you buy gasoline and motor fuel. These fuels are sold by volume in gallons or liters. The **price** you pay for gasoline **will depend upon:**

- The **octane level** which may affect the performance of your car;
- The **amount you buy**; and
- Any discounts offered.

A **computer** in the gasoline pump **calculates** what you **owe based on** the **amount** and the unit price of the gasoline. When comparing prices, be sure to compare gasoline with the same octane rating. Usually, the higher the octane rating, the higher the price. Also check to be sure you are comparing the **same unit of measurement**. Is the price per gallon or per liter? Compare the price of a gallon of gasoline at one station to the price of a gallon of the **same octane** at another station.

Many weights and measures officials routinely check gasoline pumps for accuracy. In many areas, they also check gasoline storage tanks to be sure that stations are selling the octane level advertised. If violations are found, the seller can be fined and the product can be removed.

Gasoline stations may offer a discount if you pay with cash instead of using a credit card. This “cash discount” is usually 2 to 8 cents per gallon off the regular price. On some pumps, you may be able to push a button to automatically show the discounted price.

In some cases, the attendant must figure out the cash discount and deduct it from the price showing on the pump. **To figure the cash discount in this situation:**

- **Multiply the number of gallons or liters you purchase by the credit price per gallon or liter. This should be the total price showing on the pump.**
- **Multiply the cash discount times the number of gallons or liters you purchase. This is your total cash discount.**
- **Subtract the total cash discount from the total price shown on the pump.**

Here’s an example:

You pump into your car, **10 gallons of gasoline. The credit price is \$1.30 per gallon.** The station offers a **5 cent discount per gallon if you pay with cash.** How much should you pay if you use cash?

- ✓ Multiply the number of gallons times the credit price per gallon. (10 gallons x \$1.30 = \$13.00)
- ✓ Multiply the cash discount times the number of gallons. (\$.05 x 10 = 50 cents)
- ✓ Subtract the total cash discount from the total credit price. (\$13.00 - \$.50 = \$12.50)

You should pay \$12.50 for your gasoline.

B. Try another example of pricing gasoline.

The credit price of the gasoline is 45 cents per liter. You pump 38 liters of gasoline into your car. You pay with a credit card. What is the price of your gasoline? (check page 23 for the answer)

What **YOU** Can Do:

- ✓ **Be sure the attendant or you are using the correct pump.** The octane rating and the price per gallon or liter should be clearly marked on each pump.
- ✓ **Be sure the pump is set to zero** before any gasoline is pumped.
- ✓ **Check the price** by multiplying the number of gallons or liters by the unit price. Be sure this shows as the total due.
- ✓ **Figure the cash discount**, if any. Check that you are charged the right amount.
- ✓ If using a credit card, **check your receipt** to be sure the amount billed is the amount on the pump. **Take your card and any carbon paper from the credit slip.**
- ✓ If you have a problem or question that is not resolved with the gas station, **contact your weights and measures office for advice.**

When Buying HEATING FUEL...

Home **heating fuel** and **propane** are also sold by **volume or weight**. When these products are delivered to your home, the seller must give you a “**delivery ticket**” showing the **name and address of the buyer and the seller, the delivery date, the amount and type of fuel delivered**. The unit price of the fuel should also be on the delivery ticket unless you have a special arrangement with the seller.

When Buying Firewood...

Some people heat their homes with firewood. Firewood is sold by a measurement called a “cord”.

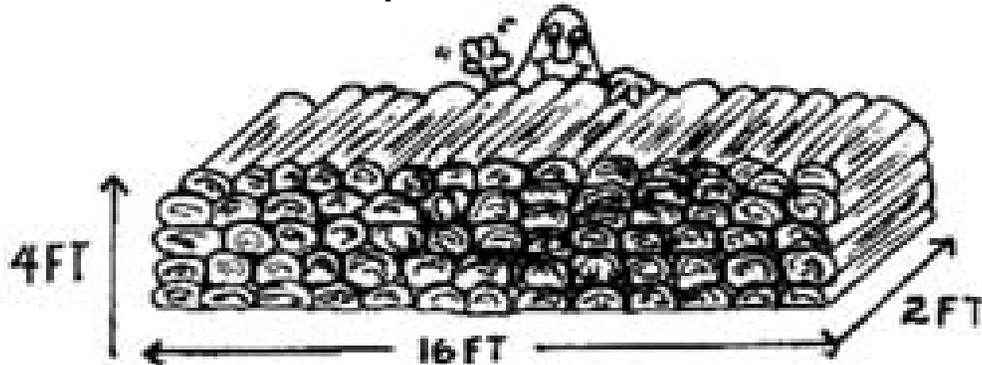
A cord is 128 cubic feet of firewood. To be sure you have a cord, you can stack and measure the wood. For example, a cord of firewood, when stacked, could be a pile that is either:

**4 feet wide, 4 feet high, and 8 feet long
(4 x 4 x 8 = 128); or**

**2 feet wide, 4 feet high, and 16 feet long
(2 x 4 x 16 = 128).**

You can stack the wood in other ways, too. If the width times the height times the length(all in feet) equals 128 cubic feet, you have a cord of firewood.

A seller may not use terms such as “truckload,” “face cord,” “rack,” or “pile.”



What YOU can do:

When you buy firewood, ask the seller to stack the wood (you may have to pay extra for this service) or stack the wood yourself.

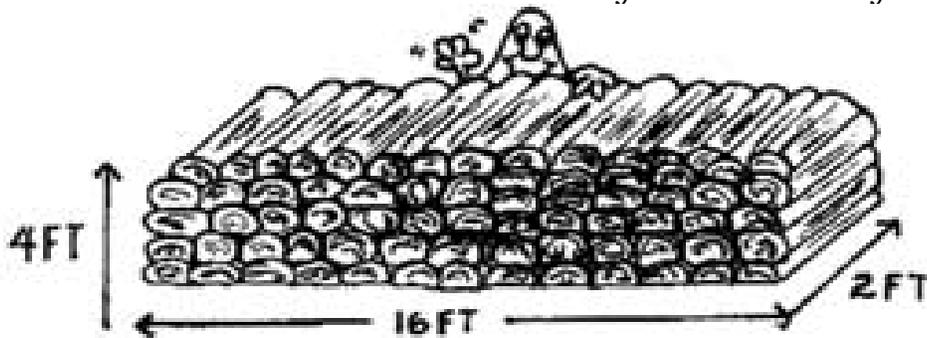
Get a receipt, which shows the seller's name, address, and phone number, and the price, amount and kind of wood purchased. Write down the license number of the delivery vehicle.

Measure the wood before using any.

Take a picture of the stack if you think there is less than a cord.

If you feel you have a problem, contact the seller before you burn any wood.

If the problem cannot be resolved, contact your local weights and measures office before you burn any wood.



Weights and Measures Is Everyone's business...

Thousands of state and local weights and measures officials throughout the country are working behind the scenes to protect YOU!

Consumers and businesses both benefit and can help their local weights and measures officials enforce the law and help to keep a fair marketplace.

LOOK FOR SEALS...

Weights and measures officials test weighing and measuring devices such as gasoline pumps and scales. **A seal** is usually put on to show that the equipment was tested and found correct.

The seal may vary from state to state, but **always look for a seal**. If you do not see one, ask the store manager. Contact your weights and measures office if seals are missing.

Do Your Part...

If you have a problem with a weights or measures issue:

- Talk with the store **manager** or **owner**.
- Give the **manager** or **owner** a chance to correct the problem.

If the manager can't or won't resolve the problem or answer questions to your satisfaction, **contact your local weights and measures office. You can find the phone number in the government section of your telephone directory or from the operator.**

Use What You Learned...

Test your skills on these examples

You need to buy 3 yards of rope. The hardware store sells the rope for \$2.50 per yard. What is the cost?

You go to the supermarket to buy dog food. The 10-pound bag costs \$6.90. The 4-pound bag is marked \$4.40. Which is the better buy?

You buy 15 gallons of gasoline at \$1.39 per gallon (credit price). There is a 4 cent per gallon cash discount. What should you pay if you use a credit card? What should you pay if you use cash?

You have 350 gallons of heating oil delivered to your home. What should you look for on the delivery ticket?

How Did You Do?

Check your answers on page 23.

Metric is coming...

Today, **many products are labeled and sold in metric measurements.** The **metric system is based on tens** and is already used in most of the world. Film, soft drinks, wines, and alcoholic beverages, tools, and bicycles are now sold in metric measurements.

The metric system may seem confusing at first, but it is very easy to use. Use this page to become familiar with the metric measurements and the terms.

Metric measurements are noted in liters, grams, and meters, or variations of these units, such as millimeters, kilograms, and centimeters.

Meter = measurement of length and area(square meter). In the future you will see this in fabric or carpet stores and for measuring distance. A meter is a little longer than a yard.

Liter = measurement of volume. You already see this on beverages; in the future, you'll see this on gasoline pumps. A liter is a little larger than a quart.

Gram = measurement of mass(weight). You already see this on many food packages. In the future you'll see this at the deli counter and the meat counter. A gram is a little more than the weight of a paper clip.

Metric Conversion Chart

When you know	Multiply by	To Find	Symbol
inches	2.5	centimeters	cm
feet	30.5	centimeters	cm
yards	0.9	meters	m
miles	1.6	kilometers	km
square inches	6.5	sq. centimeters	cm ²
square feet	0.09	sq. meters	m ²
square yards	0.8	sq. meters	m ²
square miles	2.6	sq. kilometers	km ²
acres	0.04	hectares	ha
ounces	28	grams	g
pounds	0.45	kilograms	kg
short tons (2000 lb)	0.9	metric ton	t
teaspoons	5	milliliters	mL
tablespoons	15	milliliters	mL
cubic inches	16.4	milliliters	mL
fluid ounces	30	milliliters	mL
cups	0.24	liters	L
pints	0.47	liters	L
quarts	0.95	liters	L
gallons	3.8	liters	L

Note: All conversion factors in this table are approximate because they have been rounded off to simplify calculations. A cubic centimeter(cc) is the same as a milliliter.

How Did You Do?

Check your answers with those below:

A. from page 11: There are three different sized packages of lunch bags. The 25-bag package is \$1.50. The 75-bag package is \$3.00. The 125-bag package is \$3.75. What is the unit price of each? Which is the best buy?

Answer: The unit price of each package is:

$$\mathbf{\$1.50/25 = \$0.06 \text{ per bag}}$$

$$\mathbf{\$3.00/75 = \$0.04 \text{ per bag}}$$

$$\mathbf{\$3.75/125 = \$0.03 \text{ per bag}}$$

The best buy is the 125-bag package. Each package costs \$0.03.

B. from page 15: The price of the gasoline is 45 cents per liter. You pump 38 liters of gasoline into your car. You pay with a credit card. What is the price of your gasoline?

Answer: \$17.10 (45 cents x 38 liters=\$17.10)

(No cash discount)

From page 21:

1. You need to buy 3 yards of rope. The hardware store sells the rope for \$2.50 per yard. What is the cost?

Answer: \$7.50 (3 yards x \$2.50 = \$7.50)

2. You go to the supermarket to buy dog food. The 10-pound bag costs \$6.90. The 4-pound bag is marked \$4.40. Which is the better buy?

Answer: The 10-pound bag which costs 69 cents per pound.

(\$6.90/10=\$.69 per pound; \$4.40/4=\$1.10 per pound)

3. You buy 15 gallons of gasoline at \$1.39 per gallon (credit price). There is a 4 cent per gallon cash discount. What should you pay if you use a credit card? What should you pay if you use cash?

Answer: If you use your credit card, you should pay \$20.85

(15 gallons x \$1.39 = \$20.85)

If you use cash, you should pay \$20.25

(15 gallons x \$.04 = \$.60 discount)

(\$20.85 - \$.60 = \$20.25)

4. You have 350 gallons of heating oil delivered to your home. What should you look for on the delivery ticket?

Answer: The seller's name and address; your name and address; the delivery date; the amount sold(350 gallons); the type of fuel(home heating fuel); the unit price.

**This information was brought to you by:
The National Conference on Weights and Measures**

