

## Currency: The system of money a country uses.

**exchange rate:** the price of one country's currency in terms of another nation's currency

- exchange rates fluctuates day to day.
- international trade depends on currency.
- banks, travel agents, business owners, tourists must consider exchange rates.
- may need to order in advance and fees are involved.





*Dean displays oysters ready for sale at Rodney's Oyster Depot. After a shipment of oysters is received, the oysters are graded and sold to domestic and international customers.*

### MATH ON THE JOB

Dean MacEachern grew up in Cornwall, Prince Edward Island, and attended Bluefield High School in Hampshire. Dean is now the plant manager for Rodney's Oyster Depot. "My main duties are shipping and receiving of oysters. I also do the sales to and invoicing of clients," he says. Dean is also responsible for ensuring that the quality of the oysters he sells meets or exceeds the standards set by the Canada Food Inspection Agency (CFIA).

Oyster distributors from different countries purchase oysters, by the piece, from Dean. He must ask for and compare price quotes in the currency of the country the oysters will go to. When selling oysters to an American distributor, Dean uses information on the exchange rate, gathered over a 60-day cycle, to estimate a competitive price he can sell the oysters for. The exchange rate changes every day during this cycle. What strategies can Dean use to estimate a competitive price?

**SOLUTION**

Dean could use exchange rate information from a 60-day cycle to calculate an “average” oyster price for this period. The average price would be a competitive price he could negotiate for with the American distributor.



*Dollar*

**Australia**





**Germany** *Euro*





*Yen*



**Japan**



# Scotland



# Pound





*Dollar*



**Singapore**







**Switzerland**

*Franc*



# Egypt



*Pound*



Buying Rate

The rate at which a currency exchange buys money from customers



Selling Rate

The rate at which a currency exchange sells money to its customers

## Exchange Rate

The price of one country's currency in terms of another nation's currency.



## The 'Toronto Stock Exchange'...TSX

<http://www.investcom.com/forex/forex.htm>



<http://atlantic.ctv.ca/>



<http://www.ctv.ca/business/>



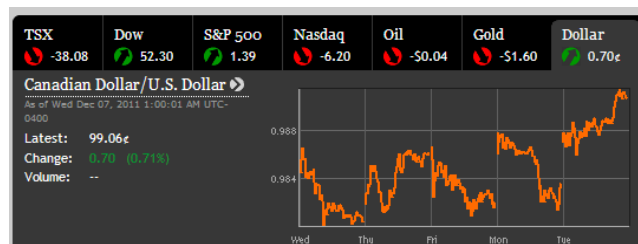
<http://www.theglobeandmail.com/globe-investor/>



<http://www.xe.com/currencycharts/?from=CAD&to=USD&view=1Y>



|                    |         |        |
|--------------------|---------|--------|
| US Dollar (\$C)    | -0.0072 | 1.010  |
| Cdn Dollar (\$US)  | +0.0070 | .991   |
| U.S. Dollar (Euro) | -0.0003 | .746   |
| U.S. Dollar (Yen)  | +0.04   | 77.720 |



On a specific date, the selling rate for the Danish krone compared to the Canadian dollar is 0.221778. How many kroner will you receive for \$500.00 CAD?

$$* 500.00 \text{ CAD} \times \frac{1 \text{ Kroner}}{0.221778 \text{ CAD}} = 2254.51 \text{ Kroner}$$

On a specific date, the selling rate for the Danish krone compared to the Canadian dollar is 0.221778. How many kroner will you receive for \$500.00 CAD?



1. Let  $x = ?$
2. Set up ratio (words)
3. Set up proportion
4. Solve

Let  $x =$  the number of  
kroner  
you will receive for \$500

$$\frac{\text{Krone}}{\text{CAD}} = \frac{1.00}{0.221778} = \frac{x}{500.00}$$

$$0.221778x = 500.00$$

$$x = 2254.50675901126$$

$$x = 2254.51$$

**HINT**

The unit of Danish currency is the krone, which is the Danish word for crown. The plural of krone is kroner.



On the same day as the previous example, the buying rate for kroner was 0.210778. If, after purchasing your kroner, you decided not to go to Denmark and sold the kroner back to the bank, how much would you lose?

$$2254.51 \text{ Kroner} \times \frac{0.210778 \text{ CAD}}{1 \text{ Kroner}} = \$475.20$$



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1. Let  $x = ?$
2. Set up ratio (words)
3. Set up proportion
4. Solve

let  $x = \text{CDN}$

$\frac{\text{kroner}}{\text{CAD}}$

$$\frac{1.00}{0.210778} = \frac{2254.51}{x}$$

$$1x = 475.20110878$$

$$x = \$475.20$$

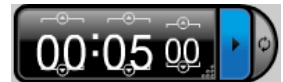


$$\$500 - \$475.20 = \$24.80$$

You would lose \$24.80 by selling the money back to the bank.



Use the table on page 45 to answer the following questions.



Calculate the amount of money you would receive in Canadian dollars if you sold 4500 shillings to the bank.

*→ ∴ buying rate*



Arnold is making a movie in Thailand, his travel allowance is \$3000. How much money will he have in the local currency for his expenses in Thailand.

Use the table on page 45  
to answer the following questions.

Calculate the amount of money you  
would receive in Canadian dollars if  
you sold 4500 shillings to the bank.

$$4500 \text{ shillings} \times \frac{0.012510^{\text{CAD}}}{1 \text{ shilling}} = 56.30 \text{ CAD}$$

Use the table on page 45  
to answer the following questions.

Arnold is making a movie in Thailand, his travel allowance is \$3000. How much money will he have in the local currency for his expenses in Thailand.

$$3000 \text{ CAD} \times \frac{1 \text{ baht}}{0.035120 \text{ CAD}} = 85421.41 \text{ baht}$$

**FIGURE 1.2****Exchange Rates Compared to the Canadian Dollar**

| <i>Bank buying rate</i> | <i>Country</i>      | <i>Currency units</i> | <i>Bank selling rate</i> |
|-------------------------|---------------------|-----------------------|--------------------------|
| 0.950964                | Australia           | dollar                | 1.006964                 |
| 1.580814                | Austria             | euro                  | 1.644814                 |
| 1.580814                | Belgium             | euro                  | 1.644814                 |
| 0.534900                | Brazil              | real                  | 0.697000                 |
| 0.127100                | China               | yuan                  | 0.162600                 |
| 0.210778                | Denmark             | kroner                | 0.221778                 |
| 1.996146                | England             | pound                 | 2.060146                 |
| 0.159300                | Egypt               | pound                 | 0.217300                 |
| 1.580814                | European Community  | euro                  | 1.644814                 |
| 1.580814                | Finland             | euro                  | 1.644814                 |
| 1.580814                | France              | euro                  | 1.644814                 |
| 1.580814                | Germany             | euro                  | 1.644814                 |
| 1.580814                | Greece              | euro                  | 1.644814                 |
| 0.128451                | Hong Kong           | dollar                | 0.133451                 |
| 1.580814                | Italy               | euro                  | 1.644814                 |
| 0.009295                | Japan               | yen                   | 0.009855                 |
| 0.012510                | Kenya               | shilling              | 0.017300                 |
| 0.083443                | Mexico              | peso                  | 0.108443                 |
| 1.580814                | Netherlands         | euro                  | 1.644814                 |
| 0.748264                | New Zealand         | dollar                | 0.798264                 |
| 1.996146                | N. Ireland          | pound                 | 2.060146                 |
| 0.194863                | Norway              | kroner                | 0.205863                 |
| 0.012360                | Pakistan            | rupee                 | 0.019360                 |
| 1.580814                | Portugal            | euro                  | 1.644814                 |
| 1.580814                | Republic of Ireland | euro                  | 1.644814                 |
| 1.996146                | Scotland            | pound                 | 2.060146                 |
| 0.737280                | Singapore           | dollar                | 0.762280                 |
| 1.580814                | Spain               | euro                  | 1.644814                 |
| 0.165558                | Sweden              | krona                 | 0.175558                 |
| 0.982007                | Switzerland         | franc                 | 1.017007                 |
| 0.026550                | Thailand            | baht                  | 0.035120                 |
| 1.004350                | United States       | dollar                | 1.038650                 |

\* Rates as of October 24, 2008





Use the table on page 45  
to answer the following questions.

Calculate the amount of money you  
would receive in Canadian dollars if  
you sold 4500 shillings to the bank.

shillings  
CAD

$$\frac{1}{0.012510} = \frac{4500}{x}$$

$$x = \$56.30$$



You would receive \$56.30.



Use the table on page 45 to answer the following questions.

Arnold is making a movie in Thailand, his travel allowance is \$3000. How much money will he have in the local currency for his expenses in Thailand.

$$\frac{\text{baht}}{\text{CAD}} \quad \frac{1}{0.035120} = \frac{x}{3000}$$

$$0.035120x = 3000$$

$$x = 85421.41$$

He would receive 85 421.41 bahts.

## THE ROOTS OF MATH

## CANADIAN CURRENCY



*This placemat is an example of Mi'kmaq quillwork. It was made in Nova Scotia around the year 1860.*

Haida symbols adorn the \$20.00 Canadian 2004 bill. Today, this \$20.00 bill can be exchanged for something, such as groceries or a haircut. Traditionally, the Haida and other Aboriginal groups also had currency exchange systems—between and within groups and with European traders.

Among the Iroquois people, wampum came to be used as a kind of money. Wampum is a European word derived from the Algonquian word *wampumpeag*. Wampum were often small beads made from white or purple shells, but other media such as coarse animal hair were also used to create wampum.

Traditionally, wampum had complex uses. It was a system of record-keeping and was used to record important historical events such as peace treaties and trade agreements made between Aboriginal peoples. It was also used for personal decoration. After Europeans arrived, wampum came to be used as a currency in the fur trade between Aboriginal peoples and Europeans.

In Atlantic Canada, currency was uncommon among the Mi'kmaq, Wolastoqewiyik, and other First Nations people before European contact. They depended on the natural resources of their surroundings, and had little use for currency. After the arrival of Europeans, Mi'kmaq women began to craft items exclusively for trade. The women used dyed porcupine quills to create baskets, boxes, and other ornamental items. Later, the Mi'kmaq began to trade the fur of animals for items such as flour and tools.

1. Do you know of other items that were traditionally used by Aboriginal peoples for trading or exchange?
2. Have you ever traded either a good, like a CD you no longer wanted, or a service, like mowing the lawn, with another person for something you wanted without exchanging money? How did you determine the value of your good or service?
3. Why do you think \$5.00 is worth \$5.00? What gives money its value?

## SOLUTIONS

1. Answers will vary. In Atlantic Canada, the Mi'kmaq people traded hand-crafted snowshoes and birchbark canoes. Other items used for trade by First Nations people included preserved meats, rare stones, tools, and furs.
2. Answers will vary. Possible factors to consider when determining the value of goods or services include the time spent providing a service, the original monetary value of the item, or the rarity of the item.
3. Answers will vary. Possible answers could include that money is valuable because it can be exchanged for goods or services, or that the value of a country's currency depends on the strength of its economy.



## **HOMEWORK: Page 47 #1 - 7**

**1.5 Build Your Skills Detailed Solutions.pdf**



## Ready for the TEST??? HOMEWORK: Page 50 #1 - 9

### Chapter 1 Unit Pricing and Currency Exchange - Practice Your Skills.pdf

#### REFLECT ON YOUR LEARNING

#### UNIT PRICING AND CURRENCY EXCHANGE

Now that you have finished this chapter, you should be able to

- apply your prior knowledge of ratios and rates in new contexts;
- appreciate how proportional reasoning is used in several jobs;
- calculate unit price and use your knowledge to determine the best buy;
- understand some of the factors that influence how prices are set;
- predict the impact of promotions on prices;
- consider other factors, such as quality and your needs, when making purchasing decisions, at home or in the workplace;
- comprehend how foreign currencies are bought and sold.

## Attachments

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Chapter 1 Unit Pricing and Currency Exchange - Practice Your Skills.pdf

1.5 Build Your Skills Detailed Solutions.pdf