

Lesson #1: Rounding

Rounding is a way of simplifying numbers to make estimations and quick calculations happen more easily. We can use it to round to the nearest dollar, nickel, or cent. In order to complete rounding, we need to follow a couple rules.

Example 1: Round \$167.34 to the nearest dollar

Step 1:	Find the place value you are rounding to	167.34
Step 2:	Look at the number <i>after</i> the place value you are rounding to	167.34
Step 3:	If that number is <i>less than five</i> , you “round down,” meaning that the number in the place value you are rounding to <i>stays the same</i>	_____ 5 ∴ _____
Step 4:	The answer is _____.	

Example 2: Round \$123.677 to the nearest cent

Step 1:	Find the place value you are rounding to	123.677
Step 2:	Look at the number <i>after</i> the place value you are rounding to	123.677
Step 3:	If that number is <i>greater than or equal to five</i> , you “round up,” meaning that the number in the place value you are rounding to <i>increases by 1</i>	_____ 5 ∴ _____
Step 4:	The answer is _____.	

Try a few examples on your own.

- 1) Round \$45.67 to the nearest dollar _____
- 2) Round \$678.345 to the nearest cent _____
- 3) Round \$99.19 to the nearest dollar _____
- 4) Round \$12.452 to the nearest cent _____

Lesson #2: Working with Money

When we talk about money, we are talking about dollars and cents. There is a notation for each, which means we use a special symbol when we are talking about dollars or cents.

For dollars, the symbol is _____. For cents, the symbol is _____.

Since there are **100 cents in one dollar**, that means that $100\text{¢} = \$1.00$. We make this conversion from cents to dollars by _____ by 100.

Example 1: Express 75¢ in dollars.

Step 1: Take the number of cents you have and divide it by 100. $75\text{¢} \div 100$

Step 2: The answer is _____.

Additional Examples: Express the following amounts in dollars.

- a) 99¢ b) 14¢ c) 80¢ d) 19¢ e) 25¢

And, since **one dollar is equal to 100 cents**, we can also convert from dollars to cents by _____ by 100.

Example 2: Express \$10.45 in cents

Step 1: Take the number of dollars you have and multiply it by 100. $\$10.45 \times 100$

Step 2: The answer is _____.

Additional Examples: Express the following amounts in cents.

- a) \$0.50 b) \$1.68 c) \$0.11 d) \$15.20 e) \$0.08

Lesson #4: Using Coins

Another aspect of working with money is to be able to manipulate coins in the most efficient way. This can mean providing optimum change or tallying the amount represented by a group of coins.

Let's start with providing optimum change.

Example 1: Use pictures or words to explain two ways you can use coins to total **one dollar**.

Example 2: Use pictures or words to explain two ways you can use coins to total **75¢**.

Now let's determine how much value there is in a group of coins.

Example 3: If you have the following coins in your pocket, how much money do you have?



Example 4: If you have the following coins in your pocket, how much money do you have?



Lesson #5: Place Value and Rounding with Money

Demonstrating our knowledge of place value and rounding accurately while using money allows us to be smarter and more effective consumers. Knowledge and ability is power.

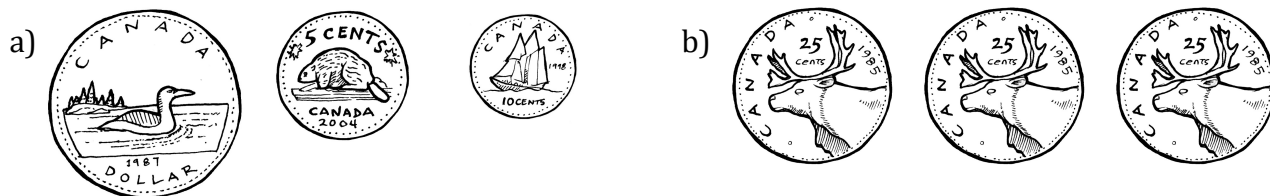
Let's review place value in the following examples:

Example 1: Circle the name of the correct place value of the underlined digit:

- | | | | |
|-------------------|----------|--------|------------|
| a) 2 <u>5</u> | tens | ones | tenths |
| b) 1 <u>4</u> 5 | hundreds | tens | ones |
| c) 12. <u>6</u> 5 | tens | tenths | hundredths |
| d) 6. <u>4</u> 0 | tens | tenths | hundredths |

Next, let's review the two different forms of writing money:

Example 2: Write each of the following amounts of money in 2 ways:



Finally, let's round using money for the purposes of estimation:

Example 3: You purchase the following items. Round each amount to the nearest dollar. Then, estimate the total.

Ice cream:	\$3.97	_____
Crackers:	\$1.47	_____
Juice:	\$2.29	_____
Total:		_____

Lesson #6: Place Value and Rounding with Money Continued

Let’s continue developing our ability to use rounding alongside money to become the most effective consumer we can be!

Example 1: The table below lists the items Melissa puts into her basket. Round each price to the nearest dollar.

<i>Item</i>	<i>Price</i>	<i>Price Rounded to the Nearest Dollar</i>
Canned peaches	\$1.97	
Frozen Dinner	\$3.97	
Bag of Oranges	\$2.39	
Broccoli	\$0.79	
Juice Boxes	\$1.19	
Apple Juice	\$2.99	

Melissa discovers that she only has \$14. Based on her rounding, will she have enough money for all the items in her basket?

Example 2: You have the following coins in your pocket:



Complete the table below for each of the three purchases:

<i>Item Purchased</i>	<i>Coins You Give Cashier</i>	<i>Amount You Give Cashier</i>	<i>Change You Get</i>
Carton of Juice \$1.45			
Box of Crackers \$2.60			
Loaf of Bread \$0.90			

Lesson #7: Rounding Without Pennies

In 2013, the Canadian government phased out the penny, and they encouraged cash interactions with vendors to be rounded to the nearest nickel. Now, in the real world, you may be required to round cash interactions to the nearest nickel.

Recall: Nickels are worth 5¢, so rounding to the nearest nickel includes 0¢, 5¢, 10¢, etc.

Example 1: Round \$1.33 to the nearest nickel

- Step 1: Look at the number in the *hundredths* place value 1.33
- Step 2: If that number is 3 or 4, you “round up,” to “5”
If that number is 1 or 2, you “round down” to “0” \therefore ____ = round ____
- Step 3: The answer is _____.

Example 2: Round \$20.66 to the nearest nickel

- Step 1: Look at the number in the *hundredths* place value 20.66
- Step 2: If that number is 8 or 9, you “round up” to “0”
If that number is 6 or 7, you “round down” to “5” \therefore ____ = round ____
- Step 3: The answer is _____.

Try a few examples on your own.

- 1) Round \$4.61 to the nearest nickel _____
- 2) Round \$30.45 to the nearest nickel _____
- 3) Round \$0.18 to the nearest nickel _____
- 4) Round \$3.57 to the nearest nickel _____