

## Tag Sale

### Purpose

Students will add and subtract decimals (to hundredths) using objects and will use a standard algorithm to add and subtract decimals.

### Materials

*For the teacher:* overhead projector, overhead coins, transparency of Black Line Master (BLM) *Coin Trading Board*, overhead markers, copy of BLM *Price Tags*

*For each student:* copy of BLM *Tag Sale*

*For each pair of students:* plastic or cardboard money (20 pennies, 20 dimes, one dollar bill), copies of BLMs *Coin Trading Board*, and *Price Tags*

### Activity

#### A. Pre-Activity Preparation

Copy the BLM *Price Tags* onto construction paper for each pair of students and one for using to model problems. Cut out the tags on your copy.

#### B. Introduction

1. Tell students they are going to use pennies and dimes to add and subtract decimals to the hundredths place.
2. Model the beginning activity using the transparency BLM *Coin Trading Board*.
3. Ask: "How many pennies do you need to equal a dollar? [100]"  
"A penny is  $\frac{1}{100}$  or 0.01 of a dollar." (\$0.01)
4. Ask: "How many dimes do you need to equal a dollar?" [10]"  
"A dime is  $\frac{1}{10}$  or 0.10 of a dollar." (\$0.10)
5. Draw a Price Tag from your stack and show it to the class (e.g., \$0.56).
6. Ask: "How many pennies are in this amount of money?" Place the pennies in the penny (hundredth) column of trading board.  
"There are  $\frac{6}{100}$  or 0.06 of a dollar (\$0.06) in this column."
7. Ask: "How many dimes?" Place the dimes in the dime column.  
Say: "There are  $\frac{5}{10}$  or 0.50 of a dollar (\$0.50) in this column."
8. Draw a second tag (e.g., \$0.45) and follow the same procedure placing the new coins on the trading board below the first ones.

(continued)



#### INCORPORATING TECHNOLOGY

Have students play the online game "Basketball Math" at [www.scienceacademy.com/index.html](http://www.scienceacademy.com/index.html) for additional practice with subtracting decimals.



#### EXTENDING THE ACTIVITY

Have students work in pairs to write word problems using prices on their Price Tags. Ask them to exchange these problems with another pair of students and work together to solve them.

Standards Link  
4.2.1

**Activity (continued)**

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9. Combine the pennies in the hundredths column and say: “How many pennies or hundredths do we have altogether?” Using the amounts in the example, you would have 11 pennies.
10. Ask: “Do we have enough pennies to trade for a dime?” [Yes, one dime.] Place this dime in the tenths column with the other dimes and leave the penny in the hundredths column.
11. Ask: “Do we have enough dimes to trade for a dollar?”
12. Say: “We have one whole, zero tenths, and one hundredth. What amount of money do we have altogether?” [\$1.01] “Notice that the decimal point comes after the whole number so that any number to the right of the decimal is a part of the whole.”

**C. Student Activity**

1. Give each pair of students the coins, BLM *Coin Trading Board*, and BLM *Price Tags*. Tell students to cut out the *Price Tags*.
2. Explain that they are going to practice adding and subtracting pennies and dimes (hundredths and tenths).
3. For each round, one partner draws a *Price Tag* from the stack and puts the correct number of pennies and dimes on the Trading Board. The other partner draws a second price tag and places their dimes and pennies on the Trading Board.
4. Together the partners should combine the pennies and dimes, trading when necessary, to find the total amount. They should also subtract the amounts.
5. Instruct students to write the numbers in columns as they would for whole numbers.
6. Tell students to do five addition and five subtraction problems using this procedure and to write each problem and its solution.

**D. Teaching the Algorithm**

1. Tell students that adding and subtracting decimals is done the same way as adding and subtracting whole numbers.
2. Tell students when writing problems with decimals, they need to keep the decimal points in a straight line and to include one in their answer.
3. Hand out the BLM *Tag Sale* to each student so that they can practice adding and subtracting decimals.

**Questions for Review**

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**Basic Concepts and Processes**

During the activity, discuss the following questions with students to gauge their understanding of the indicators:



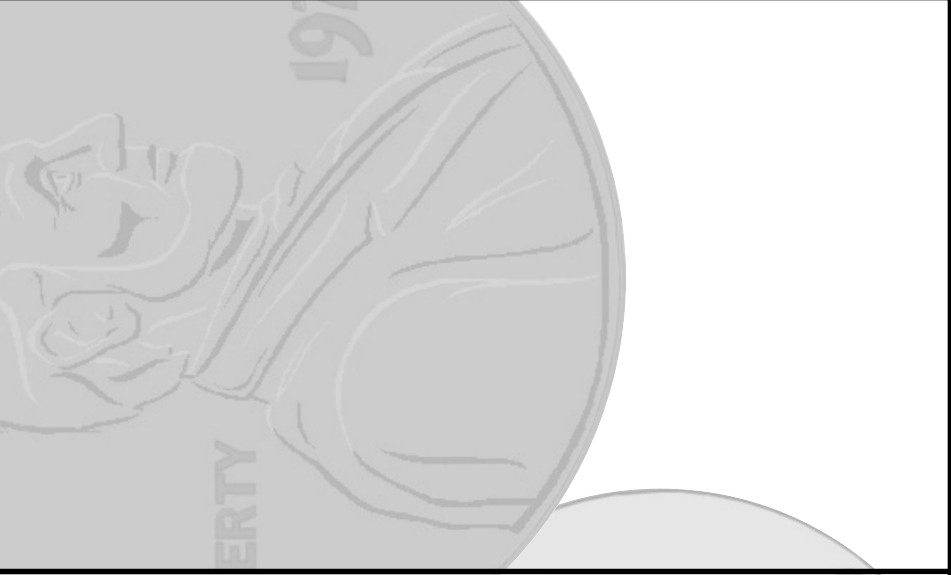


Do you need to regroup when you add/subtract here?



Show me how you do that.

# Coin Trading Board

<p>(Ones) Dollars</p>	<p>(Tenths) Dimes</p>	<p>(Hundredths) Pennies</p>
		

# ¢oin Trading Board

## Teacher Directions

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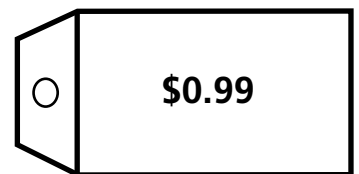
Use this BLM to help students learn to combine or take away coins to solve addition and subtraction problems.

## Answer Key

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Not applicable.

# Price Tags



# Price Tags

## Teacher Directions

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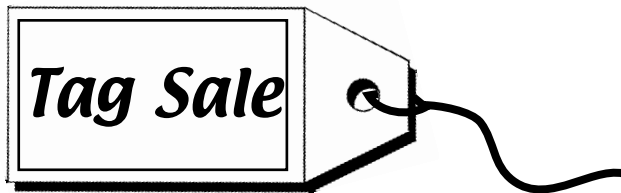
Have students cut out the tags from the BLM to use in making addition and subtraction problems.

## Answer Key

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Not applicable.

Name: \_\_\_\_\_



Solve the following problems:

1.  
$$\begin{array}{r} \$0.98 \\ + 0.72 \\ \hline \end{array}$$

2.  
$$\begin{array}{r} \$0.67 \\ - 0.48 \\ \hline \end{array}$$

3.  
$$\begin{array}{r} \$0.78 \\ + 0.25 \\ \hline \end{array}$$

4.  
$$\begin{array}{r} \$0.29 \\ - 0.06 \\ \hline \end{array}$$

5.  
$$\begin{array}{r} \$0.60 \\ + 0.59 \\ \hline \end{array}$$

6.  
$$\begin{array}{r} \$0.46 \\ - 0.27 \\ \hline \end{array}$$

7.  
$$\begin{array}{r} \$0.77 \\ + 0.63 \\ \hline \end{array}$$

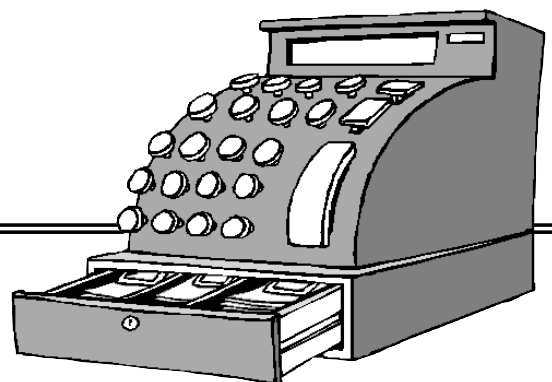
8.  
$$\begin{array}{r} \$0.36 \\ - 0.17 \\ \hline \end{array}$$

9.  
$$\begin{array}{r} \$0.52 \\ + 0.83 \\ \hline \end{array}$$

10.  
$$\begin{array}{r} \$0.39 \\ - 0.22 \\ \hline \end{array}$$

11.  
$$\begin{array}{r} \$0.63 \\ + 0.08 \\ \hline \end{array}$$

12.  
$$\begin{array}{r} \$0.78 \\ - 0.38 \\ \hline \end{array}$$



# Tag Sale

## Teacher Directions

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Have students solve the problems on the BLM to practice adding and subtracting decimals to hundredths.

## Answer Key

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1.	\$1.70	2.	\$0.19	3.	\$1.03	4.	\$0.23
5.	\$1.19	6.	\$0.19	7.	\$1.40	8.	\$0.19
9.	\$1.35	10.	\$0.17	11.	\$0.71	12.	\$0.40