

CHAPTER



Money and Money Transactions

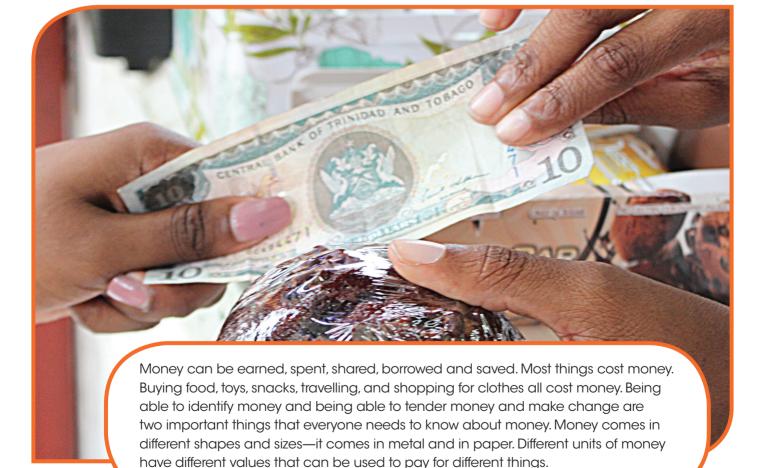
Vocabulary:

currency multi-item bills best buy unit price profit loss

Chapter Outcomes:

 Create and solve one-step and multi-step problems involving whole numbers, fractions, mixed numbers, decimal, percents including money using algorithms, mental strategies and other problem solving strategies.







Getting Ready for Chapter 14

Write the total amount of money for each shown below.















2.









3.





















- 5. \$45.26 +\$ 6.98
- **6.** \$100.00 **-**\$ 1.63
- Express 4 dollars and 5 cents using a dollar sign and decimal point.
- How do you write 125 cents using a dollar sign and a decimal point?

- 9. Ian spent $\frac{55}{100}$ of a dollar on a dinner mint. Write the amount of money he has left as a decimal in terms of dollars.
- 10. Maria has a total of 50¢ in her pocket. She has at LEAST two DIFFERENT types of coins. Draw TWO possible sets of coins that Maria could have.

Money

Teaching Point 1:

How do find an amount of money with coins and bills?

Arianna has some coins and bills in her wallet. The money is shown below. How much money does she have?



























Step 1: Find the value of each type of bill.

The value of one \$100 bill is \$100

The value of two \$20 bills is \$40

The value of one \$5 bill is \$5

The value of two \$1 bills is \$2

The total value of the bills is:

\$100 + \$40 + \$5 + \$2 = \$147



Step 2: Find the value of each type of coin.

The value of three 25¢ coins is 75¢

The value of one 10¢ coin is 10¢

The value of one 5¢ coin is 5¢

The value of two 1¢ coins is 2¢

The total value of the coins is:

75¢ + 10¢ + 5¢ + 2¢ = 92¢

Step 3: Add the values of the coins and the bills.

Total Value of the bills: \$147.00

Total Value of the coins: +\$ 0.92

Total Value: \$147.92

So, Arianna has \$147.92 in her wallet.

Activity 1:

Write the value of each sum of money shown below.

1.











2.















4.















5.



















































Activity 2:

Use the table below to answer the questions 1 to 4.

Coins and Bills in Children's Wallets								
Names	Bills			Coins				
Numes	\$20	\$10	\$5	\$1	25¢	10¢	5¢	1¢
Alex	2	1	3	4	1	0	1	9
Jane	1	3	1	6	2	3	2	1
Mary	4	2	3	1	4	3	0	2
Bill	2	6	1	4	3	0	5	4
Ana	3	0	0	10	0	7	3	8
Sam	1	5	1	1	2	3	1	1
Benny	6	0	0	0	0	0	0	0

- Calculate the sum of money that each child has.
- 2. Which child has the most money?
- 3. Which child has the least amount of money?
- 4. Sam and Benny are brothers. Their father gave them \$100 to share equally between themselves. Calculate how much money each of them would now have.
- 5. How many 10¢ coins can I get from \$7.00?
- 6. A cashier gives a customer change of one 25¢, two 10¢, and three 1¢ coins. What is the value of the change?
- 7. How many 25¢ coins are equivalent to \$5?
- 8. Shania took a bag of 5¢ coins to the bank to exchange for bills. The bank teller gave her: two \$10 bills and three \$1 bills. How many 5¢ coins did Shania take to the bank?
- 9. Vanessa has a total of \$8.00 in her piggy bank. If she only saves 10¢ coins, how many coins does she have?
- 10. Rianna has 10 coins, that have a value of \$1.50, on her desk. Some of her coins are shown below.



Write the value on the missing coins.



11. Kevin has 5 coins worth \$0.65. All the coins are either 25¢ or 10¢. How many of each coin does he have?



- 12. David has exactly enough money to buy the notebook. He has one \$10 bill, two \$1 bills and seven coins. What coins does he have?
- 13. Arnez bought a sandwich for \$11.58 and gave the shopkeeper \$100.00. What is the LEAST number of bills and coins he could get as change?

- 4 bottles of water \rightarrow \$3.00 x 4 = \$12.00
- $2 \text{ cones} \rightarrow \$8.50 \times 2 = \$17.00$
- 1 bag of popcorn \rightarrow \$6.00

Shopping Bill

Item	Quantity	Cost	Amount Paid
Water	4	\$3.00	\$12.00
Cone	2	\$8.50	\$17.00
Popcorn	1	\$6.00	\$ 6.00
	Total		

Change \rightarrow \$50.00 - \$35.00 = \$15.00

So, mother spent \$35.00 and received \$15.00 change.

Bills

Teaching Point 1:

How can you calculate multi-item bills and change?

	Price List	
Cone	Popcorn	Cupcake
\$8.50	\$6.00	\$3.00

Mother bought 4 bottles of water, 2 cones and 1 bag of popcorn.

- (a) How much money did mother spend?
- (b) If she paid with a \$50.00 bill, how much change did she get?

Activity 1:

Solve the problems below.

- Tishelle buys one pack of biscuits for \$7.35. How much change should she get if she pays with a \$20.00 bill?
- Darren bought lunch for \$47.82 and a piece of cake for \$11.36. If Darren had \$100 before his purchase, how much money does he have left now?
- Maria buys one book for \$28.95 and one ruler for \$4.29 at the book store. She gives the cashier at the store two \$20 bills. How much change should Maria receive?





- 4. Daddy went to the hardware and bought 5 lengths of PVC pipe at \$48.95 per length and 2 rolls of tape at \$15.65 each. How much did he pay for the items?
- 5. One notebook and six pens cost \$44.48. If the notebook costs \$15.98, what is the cost of one pen?



6. A bouquet is made with 3 carnations, 2 more roses than carnations, and twice as many lilies as roses. How much did the flowers in the bouquet cost?

Questions 8 to 11 are based on the price list below.

Farmer Brown's Price List

lettuce	cucumbers	peppers
\$5.00 each	\$10.00 for 5	3 for \$12.00
coconut	limes	corn
\$6.00 each	\$6.00 for 4	\$20.00 for 5

- 7. Mrs. John bought 2 heads of lettuce, 10 cucumbers, and 8 limes. Calculate how much change she would receive if she pays with a one hundred dollar bill.
- 8. Kerwin bought 1 lime, 1 corn, and 1 pepper. He gave Mr. Brown \$20.00. What was his change?
- 9. Mr. Lewis bought 5 cucumbers, 6 peppers, 8 limes and 3 coconuts. If he received \$6.00 change, how much money did he pay the farmer?



10. A caterer has to make corn soup for 200 persons at a party. One corn can make 4 servings of corn soup. Calculate the amount of money the caterer should spend on corn for 200 servings.



- 11. Teanna bought 3 rotis for herself and her friends, 2 drinks and 1 bottle of water at Salina's. Calculate how much money she spent.
- 12. Mr. Ali bought food and drink at Salina's and paid for it with a \$100 bill. He received \$23 change after

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paying the bill. What is a possible combination of the THREE items that he bought?

roti(s)	\$
	T

13. Complete Kiana's shopping bill below.

Item	Quantity	Unit Cost	Amount Paid
oranges	5	\$5.50 each	
mangoes		\$3.00 each	
		Total	\$63.50

Profit and Loss

Teaching Point 1:

How can you determine if you make a profit or a loss?

Cost Price: The price at which an item is purchased. It is written as **C.P.**

Selling Price: The price at which an item

is sold. It is written as **S.P.**

When the **selling price** of an item is more than its **cost price**, then there is a **profit**.

Anton bought a pants at \$120.00 and sold it for \$135.00. How much profit did he make?

Method: Determine the Profit

So, Anton will make \$15.00 in profit.

When the **selling price** of an item is less than its **cost price**, then there is a **loss**.

A dealer buys a watch for \$150.00. If he sells the watch for \$140.00, find his loss.

Method: Determine the Loss

$$C.P. - S.P. = Loss$$

So, the dealer will have a loss of \$10.00.

If C.P. or S.P. is given for many items, find the C.P. or S.P. for each unit. Then, calculate the porfit or loss.

Find the Selling Price

S.P. = C.P. + Profit
$$\rightarrow$$
 If there is a profit.

Find the Cost Price

S.P. = C.P. - Loss

C.P. = S.P. - Profit
$$\rightarrow$$
 If there is a profit.
C.P. = S.P. + Loss \rightarrow If there is a loss.



 \rightarrow If there is a loss.



Activity 1:

Solve the problems below.

Co	st Price	Selling Price	Profit	Loss
1.	\$1.20	\$1.50	\$0.30	
2.	\$2.90	\$3.60		
3.	\$24.70	\$23.50		
4.	\$100.00	\$78.00		
5.	\$65.94	\$70.00		
6.	\$34.20	\$45.50		
7.	\$230.00		\$40.28	
8.	\$600.00			\$3.25
9.		\$105.79	\$6.00	
10.		\$340.12		\$2.10
11.	\$698.15			\$10.89
12.	\$156.87		\$5.50	
13.		\$125.95	\$16.79	

Activity 2:

Solve.

- 1. Mark bought a table for \$1 689.00 and sold it for \$1 895.00. Calculate his PROFIT or LOSS on the transaction.
- Keva bought a bicycle for \$1 465.00. She kept the bicycle for 5 years and sold it for \$999.99. Calculate her PROFIT or LOSS.
- 3. Mikaela bought a blouse for \$80.00 and sold it at a loss of \$4.68. What was the selling price of the blouse?

- 4. A book store bought 6 dozen copy books at \$9.00 per dozen and sold them \$1.50 each. What was the profit, made by the book store?
- 5. A school cafeteria bought a case of 24 bottles of water for \$48.00. They sold each bottle of water for \$5.00. Calculate the PROFIT or LOSS.
- 6. A clothing store sold 35 pairs of socks for \$840. Each pair cost \$6.22. How much profit did the store make?
- 7. The cost price of a stove is \$2 400.

 Mother bought a stove but later sold it. If mother sold the stove at a loss of \$72.00, what was the selling price of the stove?
- 8. A vendor bought 100 limes for \$45.00 and sold them in heaps of 5 at \$15.00 a heap. What was his PROFIT or LOSS after the sale of the limes?



- 9. A furniture store sells chairs at \$987.98 each. If the profit on each chair is \$53.00, what is the cost price of each chair?
- 10. Logan bought a dozen pens for \$60.00 and sold them at a profit of \$36.00. If the selling price of each pen is the same, what is the price of each pen?
- 11. A fruit vendor bought 50 kg of bananas for \$250.00. If he wants to make a profit of \$50.00, at what price per kg must he sell the bananas?



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12. A vendor bought 6 dozen eggs from a poultry farm at \$18.00 per dozen. The vendor realized that $\frac{1}{6}$ of



each dozen eggs were broken.

- (a) How much money did the vendor spend on broken eggs?
- (b) At how much should the vendor sell each egg for if he wants to make a profit of \$24.00?
- 13. A school bought 12 bags of hotdog buns at \$8.00 a bag and 10 packs of hotdog sausages at \$24.00 a pack.
 - (a) How much money did the school spend on hotdog buns and sausages?
 - (b) If each bag had 10 buns and each pack had 12 sausages, what was the cost price of each hotdog sandwich?
 - (c) If the school sold a hotdog for \$5.00, how much profit did the school make?

- (a) How much would 15 peppers cost?
- (b) If you had \$30, how many peppers can you buy?

Step 1: Find the cost per unit.

3 peppers \rightarrow \$9

1 pepper \rightarrow \$9 \div 3 = \$3

Step 2: Solve the problem with the unit cost.

1 pepper \rightarrow \$3

15 peppers \rightarrow \$3 x 15 = \$45.00

So, 15 peppers cost \$45.00

 $$3 \rightarrow 1$ pepper

 $$30 \rightarrow $30 \div $3 = 10 \text{ peppers}$

So, \$30 will buy 10 peppers.

Unit Cost

Teaching Point 1:

How can you use unit rates to solve problems?



3 for \$9.00

Activity 1:

Find the unit cost for each item in the table.

	Items	Unit Cost
1.	3 balloons for \$27.00	
2.	5 pencils for \$6.50	
3.	10 notebooks for \$120.90	
4.	1 dozen pens for \$60.48	
5.	7 rulers for \$34.93	



6.	8 sharpeners for \$29.44	
7 .	9 erasers for \$8.91	
8.	24 markers for \$190.80	
9.	13 charts for \$195.00	
10.	20 buttons for \$18.00	

Activity 2:

Solve the problems below.

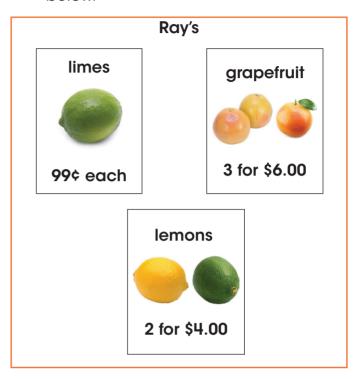


- 1. Three shirts cost \$65.43. What is the cost of 5 shirts?
- 2. Mother bought 5 books for \$15.00. How many books can she buy with \$24.00?
- 3. If 4 ice cream cones cost \$36.00. How many ice cream cones can we buy with \$136.00?
- 4. A plumber pays \$24.60 for 60 centimetres of pipe. How much would he pay for 100 centimetres of the same kind of pipe?
- 5. The bakery sells hops at the price shown below.



- (a) How much does each hops cost?
- (b) Mother wants to buy one dozen hops. How much would she pay?

Ray sells items at the prices shown below.



Maria wants to buy 1 lemon, 5 limes and 12 grapefruits

- (a) How much would she pay for the items?
- (b) If Maria gave Ray \$40.00 and used the change to buy more lemons, how many more lemons can she buy?
- 7. Marika bought 7 tickets to go to a football game. She gave the cashier six \$50-dollar bills and received \$20.35 in change. How much did each ticket cost?
- 8. Rianna bought 9 similar notebooks. She gave the cashier \$50.00 and received \$0.50 change. What was the cost of 1 notebook?
- 9. A school principal bought 10 folders and some pens. He paid \$22.50 for the



- folders. Each pen costs 5 times as much as a folder. What is the cost of a pen?
- 10. Meena bought 2 kg of rice and ½ kg of split peas from the grocery. The cost of 5 kg of rice is \$22.00. Meena spent \$14.50 in all. How much did the split peas cost?
- **11.** Tickets for the zoo are sold in different ways.

<u>Ticket A</u> **1 Child \$25.00**

<u>Ticket B</u> **1 Adult \$50.00**

Ticket C
4 Children
\$90.00

Ticket D

2 Adults plus 2 Children
\$140.00

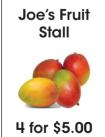
<u>Ticket E</u> **4 Adults \$160.00**

- (a) What is the cheapest option for a group of 3 adults and 6 children?
- (b) A group of 6 adults and 6 children spent \$390.00. Which tickets did they buy?

Best Buy

Teaching Point 1:

How can you use unit rates to compare?







Mark bought 4 mangoes at Joe's Fruit Stall, Ana bought 3 mangoes at Ben's Fruits and Jian bought 6 mangoes at Betty's Mangoes. Who bought mangoes at the cheapest rate?

Step 1: Find each unit rate.

Mark's mangoes

4 mangoes → \$5.00

 $1 \text{ mango} \rightarrow \$5.00 \div 4 = \$1.25$

Ana's mangoes

3 mangoes \rightarrow \$6.00

1 mango \rightarrow \$6.00 \div 3 = \$2.00

Jian's mangoes

6 mangoes → \$9.00

1 mango \rightarrow \$9.00 \div 6 = \$1.50

Step 2: Compare the rates.

\$1.25 is less than \$1.50 and \$2.00.

So, Mark bought mangoes at the cheapest rate.



Activity 1:

Solve the problems below.

1. At which store in the table below will a buyer get the best deal for each item?

Price List for Three Stores			
Best Price	Value Mart	Better Deal	
3 light bulbs	2 light bulbs	6 light bulbs	
for \$15.45	for \$10.98	for \$29.40	
10 pens for	4 pens for	12 pens for	
\$39.50	\$15.60	\$48.00	
4 batteries	2 batteries	8 batteries	
for \$24.00	for \$17.30	for \$47.60	
1 dozen rulers for \$12.96	6 rulers for \$6.00	18 rulers for \$18.90	
6 erasers for	4 erasers for	10 erasers for	
\$13.80	\$8.48	\$20.20	
6 toilet rolls	4 toilet rolls	24 toilet rolls	
for \$14.40	for \$12.56	for \$62.88	

Which container of juice is the better buy?





- 3. Super Mart sells a case of 24 bottles of Springs Water for \$54.00. The Corner Shop sells a 12 pack of Springs Water for \$27.96. Which is the better buy?
- 4. Fun Movies is offering a deal of 6 movies for \$42. If 1 movie normally costs \$10, how much will you save by taking advantage of this movie deal?
- 5. Ultracell sells a 100-minute prepaid phone card for \$21.00. Callco sells a prepaid 50-minute phone card for \$10.00. What is the better buy?
- **6.** Two shops, Just Deserts and Sweet Stuff, both sell cupcakes.





At which shop are the cupcakes sold at a better value for money?

7. A cricket coach wants to buy 24 cricket balls. Cricket balls are offered for sale at a store for the following prices:





How much money will the coach save by purchasing the 24 cricket balls in the offer with the lower unit price compared to the higher unit price?



- 8. Danielle can buy a package of 10 folders for \$12.00 or a package of 8 folders for \$11.20. Which is the better buy?
- The regular price of a notebook is \$12.00 each. Two book stores have a special offer on these notebooks.

Books-R-Us

Special Offer

Buy 2

notebooks at the regular price and get 1 **FREE**.

Value Books

Special Offer

Buy

notebooks at $\frac{1}{4}$ off the regular price.

Kevin wants to buy 6 notebooks. At which store will he get the better deal?

- 10. Shanna wants some tennis balls. Brand A costs \$6.99 for a package of 3 and Brand B costs \$33.00 for a dozen. Which is the better buy?
- **11.** The table below shows the costs of meats per kilogram at the market.

Type of Meat	Amount Purchased	Amount Paid	Cost per kilogram
Beef	4 kg	\$82.00	
Goat	5 kg	\$76.80	
Fish	3 kg	\$66.54	

- (a) Complete the table.
- (b) Which meat costs the most per kilogram?

Time and Payment Rates

Teaching Point 1:

How can you use rates to calculate payments?

Ali makes a 15 minute telephone call and is charged \$12.00. What is the cost of the call per minute?

Find the unit rate.

15 minutes → \$12.00

1 minute \rightarrow \$12.00 ÷ 15 = \$0.80

So, the cost of the call per minute is \$0.80.

Jason rented a car for 5 days at a rate of \$120.00 a day. How much did Jason pay for the rental?

Use the unit rate to solve.

1 day → \$120.00

 $5 \text{ days} \rightarrow $120.00 \times 5 = 600.00

So, Jason paid \$600.00 for the rental of the car.

Activity 1:

Solve.

- 1. A phone call costs \$4.50 for 3 minutes. What is the cost of the call per minute?
- 2. A library charges 50¢ per book per day for overdue books. Jenny returned a book that she had borrowed 12 days late. Calculate the amount of money she will pay.





- 3. A video club rents a movie for \$4.00 per day. What would be the cost of renting 3 movies for 5 days?
- 4. Royal Hotel rents its hall at \$2 000 for the first 4 hours and \$150 for every additional hour. A wedding party rents the hall for 8 hours. How much money will they pay?
- The table shows the fees for a parking lot.

Hourly Rate	\$5.00
Daily Rate	\$20.00

- (a) Mr. John parked his car on Monday from 9 a.m. to 2 p.m. How much did he pay for parking?
- (b) Mrs. Ali paid \$140.00 for parking. How long did she park her car at the lot?

The table below shows the charges for mobile phone calls. Use the table to answer **questions 4** to **6**.

Day Rate (6:00 a.m. to 6:00 p.m.)	\$1.20 per minute
Evening Rate (6:00 p.m. to 6:00 a.m.)	50¢ per minute
Weekend Rate (Saturday and Sunday)	50¢ per minute

- Alisha makes a phone call during the day that lasts 90 seconds. Calculate the cost of the call.
- Ben made 3 calls on Saturday that altogether lasted 6½ minutes and 1 call on Monday night that lasted 45

- seconds. What was the total cost of Ben's calls?
- 8. Jing used up \$10.00 on his phone card. He made 5 one-minute calls at the day rate and the rest of the calls on the weekend. How long was his weekend calls?
- 9. Mr. Lee Ping stayed at the resort advertised below:



Monday to Thursday

\$150 per night

Friday to Sunday

\$200 per night

Calculate the amount of money he spent if he stayed Thursday, Friday and Saturday nights.

Chapter Review

Solve the problems below.

- 1. Kimberly exchanged 25¢ coins for a \$10.00 bill at the bank. How many coins did she take to the bank?
- Arcadia counts the bills in her wallet. She has three \$20-dollar bills, six \$10-dollar bills, and four \$5-dollar bills. She has twice as many \$1-dollar bills than the number of \$20-dollar bills

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- and \$10-dollar bills combined. How much money does Arcadia have?
- Garvin works 9 hours every day. His daily earnings is \$148.50. How much does Garvin earn per hour?
- Isaiah has an EQUAL number of 25¢. 10¢, 5¢ and 1¢ coins in his pocket.
 - (a) What is the LEAST amount of money that Isaiah could have?
 - (b) If Isaiah has \$1.23, how many of EACH type of coin does Isaiah have?
- 5. Mr. Rattan wants to buy 3 books at a cost of \$65.95 each. Estimate the least number of \$5 bills he needs to buy the books?
- Three children bought wallets at the mall. Zara's wallet costs \$22.15. Mala's wallet costs 3 times as much as Zara's. Zion's wallet costs \$14.00 more than Mala's. How much did Zion's wallet cost?
- 7. 4 cartons of juice costs \$13.80. Find the cost of 6 cartons of juice?
- A ball was bought for \$300.00 and sold for \$350.00. Calculate in DOLLARS, the profit made.
- Andell has \$200. His money includes one or more of each of the bills in the table below.

Bills	\$100	\$50	\$20	\$10	\$5	\$1
Number of Bills						

- (a) Complete the table below to show the LEAST number of bills that Andell can have.
- (b) Andell bought lunch for \$25.00 and used up all of his \$1-dollar bills, How many of each type of bills can he now have?
- 10. A drink costs \$2.95. What is the greatest number of drinks Jared can buy with \$75.00?
- 11. Socks are 3 pairs for \$36.00. Miss James spent \$120.00 on socks. How many pairs of socks did she buy?
- 12. Sugar is sold at 2 kg for \$12.
 - (c) How much would you pay for 16 kg of sugar?
 - (d) How much sugar can you buy with \$40?
- 13. Two fruit vendors sell apples at the prices shown below.

Bettv's

Joe's



\$24 for 3 apples

\$28 for 4 apples

Sam bought one dozen apples at Joe's while Jack bought one dozen apples at Betty's.

- (a) Who paid more for the apples?
- (b) Betty and Joe buy apples at the same cost price. If Betty made a profit of \$2 on each apple sold, what was the profit on the sale of apples to Sam?



- 14. Jordan bought a shirt for \$14.56. Nico bought a shirt for three times as much money as Jordan. Avery bought a shirt for \$5.25 more than Nico. How much money did they spend altogether?
- **15.** Shania bought some items at the book store.
 - (a) Complete Shania's shopping bill below.

Item	Quantity	Unit Cost	Amount Paid
pencils	10	\$1.50 each	
erasers		\$2.00 each	
		Total	\$27.00

(b) If Shania paid for the items with one \$20 bill and two \$5 bills, how much change did she receive?









\$5.50 each

\$6.00 each

- 16. Mother bought 10 party hats and some noisemakers for a party. The noisemakers cost \$23.00 more than the party hats.
 - (a) How much did Mother pay for the party hats?
 - (b) How many noisemakers did Mother buy?

- 17. 24 copy books were bought at \$1.00 each and sold at 2 for \$3.00. What is the profit made?
- 18. Mr. Jones rented a lawn mower for 7 days at \$50.00 per day. He spent \$25.00 for gas. How much did it cost him altogether?
- 19. At the market a 2 kilograms of bananas cost \$14.00. At a supermarket5 kilograms of the same type of bananas cost \$36.00.
 - (a) Which is the better buy?
 - (b) How much can you save by buying 10 kg of the bananas that are the better buy?
- **20.** Alisha paid \$60.00 for 10 kilograms of peanuts. She divided the peanuts equally into 2 bottles as shown below.

Botte A





Bottle B

\$7.50 per kg

\$8.50 per kg

- (a) How much money did Alisha earn after selling all the peanuts?
- (b) Calculate her profit or loss after the sale of the peanuts?