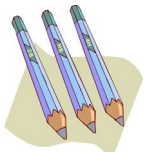
Mental Math and Money Problems

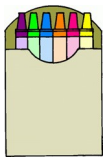
You can add money amounts in your mind, as well. Add the dollars and the cents separately.	$\$\mathbf{1}.\underline{20} + \$\mathbf{1}.\underline{50}$ $= \$\mathbf{2}.\underline{70}$	$\$\mathbf{0}.\underline{14} + \$\mathbf{1}.\underline{20}$ $= \$\mathbf{1}.\underline{34}$
If you get more than 100 cents, then those make another dollar.	$\$0.70 + \$0.70$ $= 140$ cents $= \$\mathbf{1}.40$	$\$0.99 + \$0.06$ $= 105$ cents $= \$\mathbf{1}.05$

1. Find the total cost of buying the things listed. Add mentally if you can.

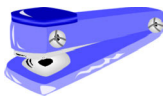

$3.10


$1.00


$1.50


80 ¢

50 ¢


$1.90


55 ¢


$2.20


$20


$35

a. scissors and pencils	**b.** pen and glue	**c.** crayons, glue, and pencils
d. eraser and calculator	**e.** microscope and scissors	**f.** book bag, pen, and crayons
g. stapler and glue	**h.** glue and eraser	**i.** scissors and stapler
j. pen, pencils, and crayons	**k.** calculator, pen, and microscope	**l.** scissors and eraser

2. Add up to the next whole dollar.

a.	b.	c.
30¢ + _____ = $1.00	$3.30 + _____ = $4.00	$1.15 + _____ = $2.00
50¢ + _____ = $1.00	$2.20 + _____ = $3.00	$1.56 + _____ = $2.00
72¢ + _____ = $1.00	$5.62 + _____ = $6.00	$1.84 + _____ = $2.00

Add up to find the change To find the change, find the difference between the price and the money given. Start from the price and add till you reach the amount the customer gives.	Price: $1.20. Customer gave $5. $1.20 $2.00 $5.00 differences → 80 ¢ $3 Change: $3.80
First add up to the next whole ten cents. Then add up to the next whole dollar (if need be). Lastly add all the differences to find the total change.	Price: $3.37. Customer gave $5. $3.37 $3.40 $4.00 $5.00 differences → 3 ¢ 60 ¢ $1 Change: $1.63

3. Find the total change.

a. Price: $1.80. Customer gave $5. $1.80 $2.00 $5.00 Change: $_____	**b.** Price: $3.26. Customer gave $4. $3.26 $3.30 $4.00 Change: $_____
c. Price: $2.19. Customer gave $5. $2.19 $2.20 $3.00 $5.00 Change: $_____	**d.** Price: $0.82. Customer gave $5. $0.82 $0.90 $1.00 $5.00 Change: $_____

4. Find the change.

a. Price: \$0.45. Customer gave \$1. Change: \$_____	**b.** Price: \$2.40. Customer gave \$5. Change: \$_____
c. Price: \$3.15. Customer gave \$3.50. Change: \$_____	**d.** Price: \$4.36. Customer gave \$5. Change: \$_____
e. Price: \$0.28. Customer gave \$0.50. Change: \$_____	**f.** Price: \$1.34. Customer gave \$5. Change: \$_____
g. Price: \$2.29. Customer gave \$2.50. Change: \$_____	**h.** Price: \$3.58. Customer gave \$3.75. Change: \$_____

5. Solve the word problems.

a. Mary bought ice cream for \$2.20 and water for \$0.70. Find the total bill and her change from \$3.
b. John bought three slices of pizza for \$1.15 each. Find the total bill and his change from \$5.
c. If you have \$3, can you buy two boxes of crayons for \$1.40 each? If not, find how much more you would need. If yes, find your change if you buy them.
d. If you have \$5, can you buy a calculator, a stapler, and a pen (see problem 1)? If not, find how much more you would need. If yes, find your change if you buy them.

Solving Money Problems

dollars		cents
	1 1	1
$ 1 4	.	0 5
2	.	1 1
+ 5 4	.	9 5
$ 7 1	.	1 1

Add dollar and cent amounts in columns the same way as any other numbers. You can imagine that the decimal point is not there while calculating. Just remember to put it in the answer!

Use the dollar symbol ($) in the first item and in the answer, when adding in columns.

1. Add the dollar amounts.

a.

$5.69
7.50
+22.25

b.

$2.99
5.79
1.40
+ 6.72

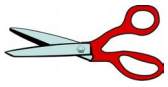
c.

$20.46
2.79
5.62
+ 6.68

d.

$12.99
25.59
41.80
+ 26.70

2. Find the total cost of buying the items listed. Line up the numbers carefully for adding.


$3.10


$11.45


$1.50


$15.99


$4.87


$1.99

a. a skirt and a book bag

b. a teddy bear, scissors, and two pens

c. a pen and three pairs of scissors

To find the change, you find the difference between the price and the money given.
To find any difference, you can:

- **Subtract** the price from the money given, OR
- **Add up** from the price to the money given.

Example. A bag costs $11.28. A customer pays with $20. What is his change?

We can add up or subtract. Subtracting to find the change often involves *regrouping over many zeros*.

Add up:

The change is $8.72.

OR subtract:

$$\begin{array}{r} {\scriptstyle 1}\ {\scriptstyle \cancel{10}}^{\,9}\ {\scriptstyle \cancel{0}}^{\,9}\ {\scriptstyle 10} \\ \$\ \cancel{2}\,\cancel{0}\ .\ \cancel{0}\ \cancel{0} \\ -\ 1\ 1\ .\ 2\ 8 \\ \hline \$\ \ 8\ .\ 7\ 2 \end{array}$$

3. Find the difference by counting up.

a. $10 – $2.65

+ ☐ + ☐

$2.65 $3.00 $10.00

So, $10 – $2.65 = _____

b. $20 – $7.50

+ ☐ + ☐

$7.50 $8.00 $20.00

So, $20 – $7.50 = _____

c. $20 – $14.45

+ ☐ + ☐

$_____ $_____$_____

So, $20 – $14.45 = _____

d. $50 – $28.35

+ ☐ + ☐

$_____ $_____$_____

So, $50 – $28.35 = _____

4. Subtract the dollar amounts. Be careful with the regrouping over many zeros!

a. $10.90 − 4.45

b. $20.00 − 7.29

c. $10.00 − 6.44

d. $50.00 − 34.56

Example The price was $5.65. A customer paid with $20 and got back $14.55. Was that correct change?

We add the price and the change and check if we get $20:

No, it was 20 cents too much.

$$\begin{array}{r} {\scriptstyle 1\ \ 1\ \ \ 1\ \ } \\ \$14.55 \\ +\ \ 5.65 \\ \hline \$20.20 \end{array}$$

5. Solve the problems.


$6.90


$6.75


$3.48


$15.99


$35.90

a. Mark bought two computer mice and paid with a $20-dollar bill. What was his change?

b. Mark bought a microscope and paid with a $50-dollar bill. He received $14.10 as change. Was that correct?

c. How many calculators can Ernest buy with $10?

d. Mark has saved $5.50, and he wants to buy a calculator and a book. How much more money does Mark need to buy them?

6. Solve the word problems.

a. Dad bought a meal for $15.55 and a drink for $2.39 at a restaurant. What was his bill?

b. Dad paid with a $50 bill. What was his change?

c. Melissa bought a book for $4.55, a magazine for $2.30, and a pencil for $0.85. What is her change from $10?

d. John bought two ice creams, coffee, and a sandwich. What was John's change from $20?

Ice cream	$2.15
Fruit juice	$1.45
Sandwich	$3.98
Omelet	$4.50
Coffee	$1.55

e. Can Mom buy a jacket for $14.55 and a blouse for $23.95 with $40?

If yes, what is her change from that?
If no, how much is she missing?