
LESSON 1: MATHEMATICS REVIEW

Part A. Adding by Combinations

Add the following columns by combining two or more numbers to total 100. Record your answers in the answer column.

1	2	3	4	5	6	7	8
1	1	3	79	22	26	51	87
6	9	3	21	78	83	38	12
9	4	7	96	14	41	72	78
5	6	8	14	43	34	29	23
4	5	2	13	17	77	11	51
8	6	1	33	24	46	25	57
2	5	1	67	34	43	84	11

Add the following columns by combining numbers into pairs.

9	10	11	12	13	14	15
1	6	96	21	41	92	21
3	1	28	38	46	43	67
2	2	57	73	73	78	36
4	1	66	82	24	27	19
1	4	34	14	76	56	61
8	1	19	73	43	43	26
6	8	28	54	66	97	15
1	6	42	61	83	84	84

Add the following columns. Then check your answers by adding in the opposite direction.

16	17	18	19	20
\$ 3.46	\$7.54	\$ 6.84	\$ 4.67	\$ 1.84
2.53	6.81	.43	3.75	.60
11.16	.02	97.06	28.16	2.18
2.14	7.15	20.17	38.42	91.43
17.80	1.40	1.43	1.07	7.81
3.09	.94	28.73	.56	4.55
5.62	2.76	.51	21.54	13.50

LESSON 1: APPLICATION

Part B. Adding Sales

Apply your mathematical skills to some sample sales. If you sold the following items, what would be the total of each sale?

ANSWERS
(4 points each)

1		2		
Item		Item		
1	\$2.25	1	\$1.86	
2	3.35	2	5.93	
3	1.39	3	1.54	
4	4.68	4	2.67	
5	<u>5.73</u>	5	6.18	
		6	1.12	1 _____
		7	6.57	2 _____
		8	<u>.23</u>	
3		4		
Item		Item		
1	\$3.59	1	\$ 2.62	
2	.71	2	319.00	
3	2.66	3	3.21	3 _____
4	6.74	4	.26	4 _____
5	.85	5	<u>4.16</u>	
6	<u>1.31</u>			
5		6		
Item		Item		
1	\$.41	1 Tennis racket	\$42.75	
2	1.18	1 can Tennis balls	2.79	
3	97.00	1 Tennis net	28.95	5 _____
4	2.19	1 set Marking tape	8.95	6 _____
5	169.00	1 Racket press	<u>4.89</u>	
6	<u>3.84</u>			
7		8		
1 Billfold	\$10.98	1 Skirt	\$16.98	
1 Fitted travel case	22.59	1 Blouse	14.50	7 _____
1 Change purse	4.98	1 Pantsuit	42.80	8 _____
1 Lighter	20.62	1 Jumper	<u>28.98</u>	
1 Key case	<u>5.49</u>			

LESSON 2: MATHEMATICS REVIEW

Part A 40 _____

Part B 60 _____

Total 100 _____

Part A. Adding and Checking

Add each of the following columns. Check your addition by adding in the opposite direction. Record your answers in the answer column at the right.

1	2	3	4
\$ 9.21	\$ 8.13	\$10.42	\$29.45
.34	2.67	9.78	99.34
.57	.92	6.52	86.19
2.23	1.44	3.47	87.49
<u>4.16</u>	.35	5.12	4.69
	<u>2.34</u>	6.92	3.84
		<u>7.14</u>	.19
			<u>.60</u>

ANSWERS
(5 points each)

- 1 _____
- 2 _____
- 3 _____
- 4 _____

5	6	7	8
\$95.68	\$72.88	\$92.96	\$77.36
46.97	46.29	22.83	5.67
47.56	37.26	87.67	95.38
40.93	95.28	38.47	96.96
9.99	89.09	8.38	33.26
.75	4.39	49.37	39.77
90.05	.75	.14	.86
45.50	37.19	10.45	71.20
<u>5.72</u>	81.10	8.16	21.99
	<u>1.84</u>	<u>71.38</u>	<u>.78</u>

- 5 _____
- 6 _____
- 7 _____
- 8 _____

LESSON 2: APPLICATION

Part B. Listing Sales

List each sale in the left-hand column on the sales check provided, total each sale, and record your total in the answer column at the right. Remember to write clearly.

1

1 Catcher's mitt \$8.69; 1 Fielder's glove \$5.69; 1 Semi-pro hat \$3.44; 1 Official ball \$12.75; 1 Mask \$8.89; 1 pr Baseball shoes \$8.69; 1 Cap \$1.79

Sales Check		
Quantity	Description	Amount

(10 points each)

- 1 _____

6

1 Safety helmet \$18.95; 1 Rearview mirror \$6.19; 1 Face shield \$6.98; 1 pr Goggles \$7.98

Sales Check		
Quantity	Description	Amount

ANSWERS
(10 points each)

6

Number Combinations

Skill in number combinations is the key to quick, accurate addition. With practice, you can increase your speed and accuracy. Try the drill that you used in the last review again. Add 3 to each of the numbers below, reading from left to right. After this, try adding 4 to each. Then add 5, 6, 7, 8, and 9 to each. Your time should be two minutes. Ready! Set! Go!

11 17 13 15 19 12 18 16 14
21 24 26 27 23 25 28 22 29

You will probably sell only two or three items to a customer at any one time. Practice adding two or three items quickly so that you will be more efficient. Practice the following combinations until you can arrive at the sums easily.

	1	2	3	4	5	6	7	8	9	10
a	12	13	11	13	15	25	32	34	21	12
	<u>16</u>	<u>15</u>	<u>18</u>	<u>24</u>	<u>12</u>	<u>10</u>	<u>12</u>	<u>15</u>	<u>17</u>	<u>11</u>
b	13	12	13	15	14	12	15	17	13	11
	11	14	12	11	12	16	13	11	11	14
	<u>12</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>12</u>	<u>11</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>12</u>
c	12	16	15	17	12	17	13	12	16	14
	13	14	14	11	15	16	11	19	16	19
	<u>15</u>	<u>12</u>	<u>12</u>	<u>13</u>	<u>16</u>	<u>12</u>	<u>19</u>	<u>14</u>	<u>12</u>	<u>12</u>
d	31	14	15	22	15	18	22	26	28	23
	15	12	21	18	13	21	23	27	25	27
	<u>12</u>	<u>23</u>	<u>11</u>	<u>25</u>	<u>14</u>	<u>10</u>	<u>29</u>	<u>36</u>	<u>35</u>	<u>11</u>

Making Change

Every salesperson handles money. Customers seldom pay the exact amount of money for any given purchase. Therefore, making change is a basic part of selling. Correct change-making pro-

cedures will reduce errors and create goodwill among customers. (Note: The following terms for various parts of cash registers are defined in Chapter 3.)

The first step in money handling is proper arrangement of the money in the cash drawer.

For each of the previous sales, record the correct change to be returned to each customer.

(4 points each)

SALE	AMOUNT RECEIVED	CHANGE DUE									
		1¢	5¢	10¢	25¢	50¢	\$1	\$2	\$5	\$10	
1	\$20										6
2	42										7
3	30										8
4	10										9
5	20										10

Part C. Making Change Rapidly

In the following answer columns, record the change due the customer in each sale. Start with the amount of the sale and add to it mentally as you would when making change.

(3 points each)

SALE	AMOUNT OF SALE	SALES TAX	TOTAL	AMOUNT RECEIVED	CHANGE DUE								
					1¢	5¢	10¢	25¢	50¢	\$1	\$2	\$5	\$10
0	\$ 1.09	\$.05	\$ 1.14	\$ 5	1		1	1	1	1	1		
1	.35	.02	.37	1									
2	3.45	.17	3.62	5									
3	1.67	.08	1.75	10									
4	1.92	.10	2.02	5									
5	.17	.01	.18	5									
6	8.61	.43	9.04	10									
7	4.12	.21	4.33	5									
8	2.15	.11	2.26	10									
9	11.18	.56	11.74	20									
10	8.74	.44	9.18	20									

LESSON 4: MATHEMATICS REVIEW AND APPLICATION

Part A. Listing Sales

You have a part-time position in the City Stationers Company. You have made five sales in the last two hours. Fill out a sales check for each sale. List the amount of each item in the left-hand column, and then total the sale. Record the totals in the answer column at the right.

Part A 30 _____
 Part B 30 _____
 Part C 40 _____
 Total 100 _____

ANSWERS
(6 points each)

1

1 set Felt tip pens \$1.98; 1 set Markers \$1.63; 24 Ballpoint pens \$2.12; 1 doz Lead pencils \$1.85; 1 set Colored pencils \$3.33.

Sales Check			
Quantity	Description	Amount	

1 _____

2

1 Money changer \$8.35; 1 Paper punch \$5.39; 1 Memo roll \$3.46; 1 Tape dispenser \$2.42; 1 Postal scale \$6.79.

Sales Check			
Quantity	Description	Amount	

2 _____

3

1 bx Bond envelopes \$8.95; 1 pkg Typing paper \$2.39; 1 pkg Onionskin \$2.63; 1 bx Clasp envelopes \$5.69; 1 pkg Filler paper \$1.96; 1 pkg Second sheets \$2.69.

Sales Check			
Quantity	Description	Amount	

3 _____

LESSON 3: MATHEMATICS REVIEW AND APPLICATION

Part A 40 _____
 Part B 30 _____
 Part C 30 _____
 Total 100 _____

Part A. Making Change

In the answer columns on the following chart, show the change due the customer in each case given. Start with the amount of the sale and add to it mentally as you would in making a sale.

ANSWERS
 (4 points each)

SALE	AMOUNT OF SALE	SALES TAX	TOTAL	AMOUNT RECEIVED	CHANGE DUE										
					1¢	5¢	10¢	25¢	50¢	\$1	\$2	\$5	\$10		
0	\$.29	\$.02	\$.31	\$.50	4	1	1								
1	.35	.02	.37	.50											1
2	.63	.03	.66	1.00											2
3	3.27	.17	3.44	5.00											3
4	4.29	.22	4.51	10.00											4
5	12.00	.60	12.60	15.00											5
6	18.80	.95	19.75	20.00											6
7	25.00	1.25	26.25	30.00											7
8	33.50	1.68	35.18	40.00											8
9	36.00	1.80	37.80	40.00											9
10	45.25	2.26	47.51	50.75											10

Part B. Totaling Sales and Making Change

On a separate sheet of paper, list the item amounts of the following sales and determine the total for each sale. Record the total for each sale in the right-hand column of the form.

(2 points each)

- 1 1 Coffeemaker \$6.95; 1 pkg Filter cloths \$.58; 1 Filter rod \$.90; 1 Saucepan \$2.25; 1 Double boiler \$3.89; Sales tax \$.73. 1 _____
- 2 1 LP Record \$2.98; 2 LP Records \$3.49 ea; 1 Tape \$7.89; 1 Tape \$5.79; 1 Cassette rack \$4.75; 1 Tape stacker \$9.85; Sales tax \$1.91. 2 _____
- 3 1 Jersey \$5.39; 1 Warm-up jacket \$8.25; 1 pr Cotton shorts \$4.90; 1 Sport hat \$5.35; 1 pr Socks \$1.29; Sales tax \$1.26 3 _____
- 4 1 Lipstick \$2.75; 1 Cold cream \$2.50; 1 Cleansing cream \$1.95; 1 Lotion \$1.98; Sales tax \$.46. 4 _____
- 5 1 Pocket comb \$.89; 1 Hairbrush \$2.95; 1 Wave set \$3.89; 1 Mirror \$5.98; Sales tax \$.69. 5 _____

ANSWERS
(1 point each)

5
 $9 \times \$.78 = \$$

6
 $9 \times \$3.14 = \$$

5 _____

6 _____

7
 $11 \times \$.36 = \$$

8
 $11 \times \$1.24 = \$$

7 _____

8 _____

9
 $12 \times \$.14 = \$$

10
 $12 \times \$2.35 = \$$

9 _____

10 _____

Determine the cost of each group of items in the following problems. Record your products in the spaces provided, and in the answer column at the right. Also find the total of each sale and transfer the totals to the answer column at the right.

	DOLLARS	CENTS
11		
2 Scarves @ \$3.79		
13		
3 Shirts @ \$5.35		
15		
6 pr Socks @ \$1.85		
17		
4 Shorts @ \$2.75		
19		
Sale total		

12	
3 Ties @ \$5.98	
14	
2 Sweaters @ \$8.48	
16	
8 Handkerchiefs @ \$2.25	
18	
6 T-shirts @ \$3.52	
20	
Sale total	

DOLLARS	CENTS

(1 point each)

11 _____

12 _____

13 _____

14 _____

15 _____

16 _____

17 _____

18 _____

19 _____

20 _____

Part B. Multiplying by 10, 100, 1,000

Multiply each of the following amounts by 10, by 100, and by 1,000. Transfer each of your answers to the space provided in the answer column at the right.

	$\times 10$	$\times 100$	$\times 1,000$
1			
\$ 1.19	_____	_____	_____
4			
5			
6			

(1 point each)

1 _____

2 _____

3 _____

4 _____

5 _____

6 _____

\$25.00	_____	_____	_____
---------	-------	-------	-------

		ANSWERS (3 points each)
5	6	5 _____
12 Geraniums @ \$.95 _____	11 Handkerchiefs @ \$1.79 _____	6 _____
7	8	7 _____
Total _____	Total _____	8 _____
9	10	9 _____
2 pr Gloves @ \$5.60 _____	6 bx Soap @ \$1.25 _____	10 _____
11	12	11 _____
9 Shirts @ \$10.50 _____	11 cases Tissues @ \$8.40 _____	12 _____
13	14	13 _____
6 Scarves @ \$4.35 _____	8 cases Pickles @ \$5.75 _____	14 _____
15	16	15 _____
Total _____	Total _____	16 _____
17		
10 pr Shorts @ \$2.55 _____		
18		
20 T-shirts @ \$3.25 _____		
19		17 _____
60 Ties @ \$9.00 _____		18 _____
20		19 _____
Total _____		20 _____

Part B. Writing Up Sales

You have learned your arithmetic and sales check procedures, and are now ready to keep a sales book, make change, and make up a book at the end of the day. You also know how to determine the sales tax, parcel post, and COD charges. Write up the following sales. Use 0736 as your identification number, and use a 5 percent sales tax in all cases. Prepare the tally sheet.

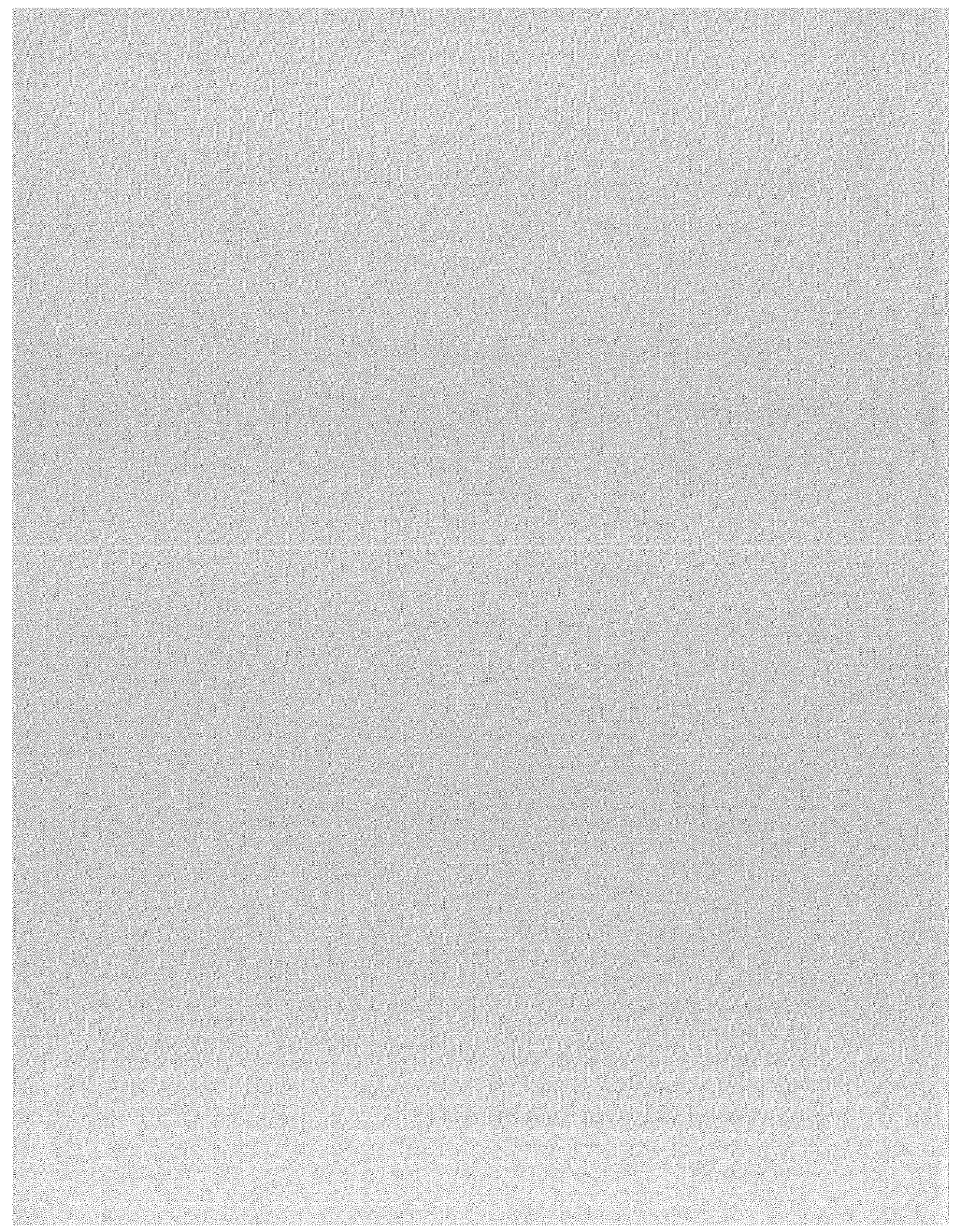
SALE 1. DEPARTMENT: LINEN

- 2 Tablecloths, 52 x 70 white, oblong @ \$8.99 each
- 3 Cloths, 62 x 84, gold, oval @ 9.99 each
- 12 Napkins, white @ 1.69 each
- 18 Napkins, gold @ 1.79 each
- Shipping charges \$5.25

SALE 2. DEPARTMENT: GLASSWARE

- 2-40 piece sets, Crystal glassware, Monard @ \$79.99
- 2-40 piece sets, Crystal glassware, Savoy @ 69.99
- 3-40 piece sets, Crystal glassware, Starlight @ 54.99
- 8-Goblets Crystal glassware, Savoy @ 2.49

Free Delivery



When you use division in sales calculations, at least one of the figures in the division operation will refer to dollars and cents. You must therefore understand division with decimals. When you divide a decimal by a whole number, perform the following steps:

Step 1 Place the decimal point in the quotient space directly above the decimal point in the dividend.

Step 2 Divide.

- o When you pay \$31.68 for 144 items, each item costs \$.22.

$$\begin{array}{r}
 \text{quotient} \\
 \text{divisor } 144 \overline{) 31.68} \text{ dividend} \\
 \underline{288} \\
 288 \\
 \underline{288} \\
 0
 \end{array}$$

NUMBERS TO THE NEAREST CENT

In doing division problems involving dollars and cents, you cannot expect the quotient always to turn out to be in whole cents. As in any other division problem, there can be a remainder. You will have to determine the answer to the nearest cent. In such a case, continue the division to three decimal places in the answer. Round off the answer to the nearest cent (two decimal places). If the number in the third place is 5 or more, add 1 cent. If the number in the third place is less than 5, drop the number.

- o If the following quotients were rounded off to the nearest cent, your answer would be:

QUOTIENT	ANSWER TO THE NEAREST CENT
1.281	1.28
1.285	1.29
1.287	1.29
1.284	1.28

LESSON 9: MATHEMATICS REVIEW AND APPLICATION

Part A. Division Review

Perform each of the following divisions. Check your answer. Record the quotient in the space provided in the answer column at the right.

Part A 40 _____

Part B 60 _____

Total 100 _____

ANSWERS
(8 points each)

$34 \overline{) 2,176}$	Check:	1	1 _____
$304 \overline{) 8,512}$	Check:	2	2 _____
$228 \overline{) 142,500}$	Check:	3	3 _____
$135 \overline{) 67,635}$	Check:	4	4 _____
$86 \overline{) 3,096}$	Check:	5	5 _____

Part B. Division in Sales

Do the following decimal divisions. Check your answers by multiplication. Give your answers in dollars and cents in the answer column at the right.

		ANSWERS (10 points each)
	1	
76 $\overline{)7,828.76}$	Check:	1 _____
	2	
134 $\overline{)22,782.68}$	Check:	2 _____
	3	
218 $\overline{)93.70}$	Check:	3 _____
	4	
57 $\overline{)906.30}$	Check:	4 _____
	5	
652 $\overline{)3,846.80}$	Check:	5 _____
	6	
381 $\overline{)5,867.40}$	Check:	6 _____

AVERAGE SALES

Frequently, you will be asked to determine the average sale you made over a day or a week. Or, for example, you may want to compare your average sale over a given period with the averages of your coworkers. As you probably already know, an average is calculated by adding the amounts of all items and dividing by the number of items. To calculate an **average sale**, add the amounts of the sales you have made and divide this sum by the total number of sales. In the same way, you can find the average price of the following items.

	ITEM	PRICE	
o	1	\$.45	
	2	.58	
	3	.79	
	4	.88	
	5	.65	
		Sum	\$3.35
		Number of items:	5
		Sum of prices:	\$3.35

$$\begin{array}{r} \$.67 \\ 5 \overline{) 3.35} \\ \text{Average price: } \$.67 \end{array}$$

ERRORS IN REGISTRATION

If an error has been made while recording a sale on the cash register and the error was noticed before the motor bar was pressed, the keys may be released by the release lever. The correct record can now be made.

If, however, the error is not discovered until after the amount has been actually registered into the machine, it is necessary to void the receipt. This voiding is generally done by a supervisor.

A new record is then made of the correct amount. The **voided receipt** is placed in the cash drawer for the reconciliation at the end of the day. Always save all voided receipts. Keep them in the cash drawer.

When an error is made in recording the sale, the receipt must be voided whether it is an overring

Find the percentage for each of the following items. Be sure to check that your answers are reasonable. Record your answers in the spaces provided and in the answer column at the right.

ANSWERS
(2 points each)

- | | | | | | |
|----|---------------------------|----|----------------------------|----|-------|
| 11 | 22% of \$245 = _____ | 12 | 22¼% of \$360 = _____ | 11 | _____ |
| | | | | 12 | _____ |
| 13 | 12% of \$240 = _____ | 14 | 52.6% of \$190 = _____ | 13 | _____ |
| | | | | 14 | _____ |
| 15 | 26% of \$186.50 = _____ | 16 | 12.75% of \$132.60 = _____ | 15 | _____ |
| | | | | 16 | _____ |
| 17 | 32% of \$1,246.80 = _____ | 18 | 205% of \$80 = _____ | 17 | _____ |
| | | | | 18 | _____ |
| 19 | 48½% of \$500 = _____ | 20 | 21.2% of \$96.27 = _____ | 19 | _____ |
| | | | | 20 | _____ |

LESSON 19: APPLICATION

Part B. Calculating Discount and Net Amount

Determine the discount and net amount for each of the following invoices. Record the answers in the spaces provided and in the answer column at the right.

INVOICE NUMBER	GROSS AMOUNT	DISCOUNT RATE	a		b	
			DISCOUNT	NET AMOUNT	(2 points each)	
1	\$ 210.00	10%	_____	_____	1 a	_____
					b	_____
2	\$ 362.50	12%	_____	_____	2 a	_____
					b	_____
3	\$ 97.80	20%	_____	_____	3 a	_____
					b	_____
4	\$1,247.50	25%	_____	_____	4 a	_____
					b	_____

