LESSON 3 ADDITION AND SUBTRACTION

Add or subtract the numbers. Remember to regroup when necessary.

1.
$$\begin{array}{r} 490 \\ +\ 569 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 6{,}437 \\ 4{,}409 \\ +\ 1{,}703 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 53 \\ -\ 26 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 72 \\ -\ 33 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 89 \\ +\ 38 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 328 \\ -\ 59 \\ \hline \end{array}$$

Solve the problems.

7. Calvin works at Rose Villa, a nursing home. At the monthly birthday party, he said, "Happy Birthday, everyone," and then give the total age of all the residents celebrating birthdays. He listed the names and ages of all the residents on his floor:

Mrs. Jones: 83; Mrs. Taylor: 79; Mr. Scott: 85; Mrs. Bailey: 94; Mrs. Rosen: 95; Mr. Walton: 84; Mrs. Garcia: 85; Mr. Bitar: 90

What was the total age Calvin gave for these residents?

a. 695

b. 659

c. 595

d. 569

8. At Sam's Sandwich Shop, Josie's manager printed 550 coupons to give to customers. Each customer got one coupon after buying a sandwich. At the end of the week, there were 38 coupons left. How many customers left with a coupon?

_____

Multiply or divide the numbers.

1. 68×3

2. $1{,}865 \times 21$

3. 80×32

4. $4\overline{)96}$

5. $7\overline{)108}$

6. $8\overline{)2429}$

Solve the problems.

7. Lois is preparing a banquet room at the Sterling Hotel for a dinner party tonight. One of her tasks is to put fresh flowers into vases for the tables. There are 8 tables and each table has a vase. She has a pail with 100 flowers and wants her to put an equal number of flowers in each vase.

A. How many flowers will Lois put in each vase?

a. 11

b. 12

c. 13

d. 14

B. Are there any flowers left over? If so, how many? _____

8. Will assists a chef in a Mexican food restaurant. He is submitting an order to the food supply company for more taco shells for the next 2 weeks. He knows that on average the restaurant goes through about 125 soft shells per day and 75 hard shells. How many of each kind should he order? (*Hint:* There are 7 days in a week.)

Soft shells: _____

Hard shells: _____

LESSON 5 ESTIMATION

Estimate the following numbers.

1. Round 756 to the nearest hundred.

a. 750

b. 700

c. 800

d. 900

2. Round 1,334 to the nearest thousand.

a. 1,340

b. 1,000

c. 1,400

d. 1,300

3. Round 23 to the nearest 10. _____

4. Round 1,371 to the nearest hundred. _____

Round the numbers in the problems, then do the operation.

5.
$$\begin{array}{r} 57 \\ +\ 21 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 63 \\ \times\ 17 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 6{,}003 \\ -\ 4{,}989 \\ \hline \end{array}$$

8. $32\overline{)288}$

Estimate to solve the problem.

9. Every year, the town of Westfield has a 5K race to raise money for child cancer patients. This year, the Westfield Animal Hospital will donate pencils, water bottles, stickers, and discount coupons to all runners. Eric is putting the items into gift bags for the runners. He has 1,100 pencils, 280 water bottles, 2,300 stickers, and 350 gift coupons. There are 189 runners. Estimate how many if each item Eric will put into each gift bag.

Pencils: _____

Water bottle: _____

Stickers: _____

Coupons: _____

LESSON 6 FRACTIONS

Simplify these fractions.

1. $\frac{12}{48}$ = _____
2. $\frac{21}{49}$ = _____
3. $\frac{22}{66}$ = _____
4. $\frac{6}{16}$ = _____
5. $\frac{30}{33}$ = _____

Convert these mixed numbers to improper fractions.

6. $5\frac{1}{3}$ = _____
7. $3\frac{7}{8}$ = _____
8. $9\frac{1}{4}$ = _____
9. $10\frac{1}{2}$ = _____
10. $7\frac{2}{5}$ = _____

Convert these improper fractions to mixed numbers.

11. $\frac{9}{2}$ = _____
12. $\frac{23}{3}$ = _____
13. $\frac{98}{24}$ = _____
14. $\frac{11}{4}$ = _____
15. $\frac{17}{5}$ = _____

Add or subtract these fractions.

16. $\frac{3}{8} + \frac{5}{8}$ = _____
17. $4\frac{2}{3} - 2\frac{1}{3}$ = _____
18. $11 - 7\frac{3}{5}$ = _____
19. $\frac{2}{3} + \frac{2}{7}$ = _____
20. $\frac{8}{15} - \frac{1}{6}$ = _____

Solve the problems.

21. Ibrahim works in a furniture shop as an assistant learning how to work with wood. Emily Stern ordered a bookcase. She came into the shop to look at the plans and decided she wanted a smaller bookcase. Ibrahim suggested they reduce the measurements to $\frac{1}{2}$ of the amounts. Emily agreed.

    Complete the chart with $\frac{1}{2}$ of the measurement amounts. The first one is done for you.

Bookcase for Emily Stern

	Current	New
Shelf length	$2\frac{1}{2}$ ft	$1\frac{1}{4}$ ft
Shelf width	$1\frac{3}{4}$ ft	
Side height	$4\frac{3}{4}$ ft	
Back height	$5\frac{1}{4}$ ft	
Top length	$2\frac{3}{4}$ ft	

22. Ivan works at Dalton Dry Cleaners, which also repairs clothing, shoes, and purses. Ivan has a leather cord that is $3\frac{3}{4}$ ft long. He needs $2\frac{1}{3}$ ft of the leather cord for a purse strap. Ivan wants to know how much of the leather will be left after he cuts it. He needs 14 inches to use for a small bag.

A. What does Ivan need to do to solve his problem?

a. add $3\frac{3}{4}$ ft and 14 in

b. add $3\frac{3}{4}$ ft and $2\frac{1}{3}$ ft

c. subtract $2\frac{1}{3}$ ft from $3\frac{3}{4}$ ft

d. subtract 14 in from $2\frac{1}{3}$ ft

B. What common denominator does Ivan use?

a. 4

b. 8

c. 10

d. 12

C. Write Ivan's problem using a common denominator. _____

D. Write Ivan's answer. _____

E. Does Ivan have enough left for a 14 in cord?

a. No. The amount < 14 in.

b. Yes. The amount = 14 in.

c. Yes. The amount > 14 in.

F. What is Ivan's answer in inches?

a. 12 in

b. 14 in

c. 17 in

d. 18 in

Perform the operation on the decimals.

1. 29.1 + 15.45 = _____
2. 122.33 – 98.6 = _____
3. 465 – 23.75 = _____
4. 9.75 × .25 = _____
5. 92 × 7.15 = _____
6. 15.075 ÷ 5 = _____
7. 94.38 ÷ 11 = _____
8. 129.69 × 5.1 = _____

Solve the problems.

9. Ron and 4 coworkers have decided to order lunch today—a sandwich with chips and a large drink. Ron will place the order and collect the money. His coworkers want to know how much it will cost each of them before they place the order. A sandwich with chips is $6.95 and a large drink is $1.65. There is a $3.50 delivery charge.

   A. First, Ron figures out that the total cost of the order, including the delivery charge, is _____

   B. What operation does Ron use to figure out how much each person owes?

   _____

   C. How much does each person need to pay? _____

10. You are shopping for a case of water and want to get the best deal. The AquaClear water costs $10.56 for 48 bottles. Another case, Spring Fresh, costs $12.48 for 52 bottles of water.

    A. What is the unit price of each bottle of AquaClear? _____

    B. What is the unit price of each bottle of Spring Fresh? _____

    C. Which case is the better deal?

_____

LESSON 8 PERCENTS

Convert the percents to decimals and convert the decimals to fractions.

1. 65% = _____
2. 12% = _____
3. 38% = _____
4. .45 = _____
5. .05 = _____
6. .19 = _____

Find the percent of the amounts in the problems.

7. 20% of 60 = _____
8. 25% of 300 = _____
9. 8% of $225 = _____
10. 18% of $80 = _____
11. 6% of $112 = _____
12. 15% of 50 = _____

Solve the problems.

13. Esther works at Mattress World. She gets a 12% commission on each mattress she sells. She just sold a queen-sized mattress for $359. What is her commission?

    A. Your problem: _____

    B. Your answer: _____

14. Ali is a tailor. Most of his work is customers who want him to make their clothes bigger or smaller. Customers usually pick up their clothes three or four days after they drop them off. If a customer needs faster service, Ali adds a 15% charge. What is the charge for a customer who wants to pick up his suit tomorrow? The alterations are $45.

    _____

ANSWER KEY

Lesson 3

1. 1,059
2. 12,549
3. 27
4. 39
5. 127
6. 269
7. a.
8. 512 (550 – 38 = 512)

Lesson 4

1. 204
2. 39,165
3. 2,560
4. 24
5. 15 R3
6. 303 R5
7. A. b.
B. Yes, 4 flowers are left over. (100 ÷ 8 = 12 R4)
8. Soft shells: 1,750 (125 × 14)
Hard shells: 1,050 (75 × 14)

Lesson 5

1. c.
2. b.
3. 20
4. 1,400
5.
$$\begin{array}{r} 60 \\ +\ 20 \\ \hline 80 \end{array}$$
6.
$$\begin{array}{r} 60 \\ \times\ 20 \\ \hline 1{,}200 \end{array}$$
7.
$$\begin{array}{r} 6{,}000 \\ -\ 5{,}000 \\ \hline 1{,}000 \end{array}$$
8. 300 ÷ 30 = 10
9. Pencils: 5 (1,100 divided by 200 = 5 R100)
Water bottles: 1 (300 divided by 200 = 1 R100)
Stickers: 11 (2,300 divided by 200 = 11 R 100)
Coupons: 2 (400 divided by 200)

Lesson 6

1. $\frac{1}{4}$
2. $\frac{3}{7}$
3. $\frac{1}{3}$
4. $\frac{3}{8}$
5. $\frac{10}{11}$
6. $\frac{16}{3}$
7. $\frac{31}{8}$
8. $\frac{37}{4}$
9. $\frac{21}{2}$
10. $\frac{37}{5}$
11. $4\frac{1}{2}$
12. $7\frac{2}{3}$
13. $4\frac{2}{24} = 4\frac{1}{12}$
14. $2\frac{3}{4}$
15. $3\frac{2}{5}$
16. $\frac{8}{8} = 1$
17. $2\frac{1}{3}$
18. $10\frac{5}{5} - 7\frac{3}{5} = 3\frac{2}{5}$
19. $\frac{14}{21} + \frac{6}{21} = \frac{20}{21}$
20. $\frac{16}{30} - \frac{5}{30} = \frac{11}{30}$
21.

	Current	New
Shelf length	$2\frac{1}{2}$ ft	$1\frac{1}{4}$ ft
Shelf width	$1\frac{3}{4}$ ft	$\frac{7}{8}$ ft
Side height	$4\frac{3}{4}$ ft	$2\frac{3}{8}$ ft
Back height	$5\frac{1}{4}$ ft	$2\frac{5}{8}$ ft
Top length	$2\frac{3}{4}$ ft	$1\frac{3}{8}$ ft

22. A. c.
B. d.
C. $3\frac{9}{12} - 2\frac{4}{12}$
D. $1\frac{5}{12}$
E. c.
F. c.

Lesson 7

1. 44.55
2. 23.73
3. 441.25
4. 2.4375
5. 657.8
6. 3.015
7. 8.58
8. 661.419
9. A. $46.50 (5 × $6.95 = 34.75; 5 × $1.65 = $8.25; $34.75 + $8.25 + $3.50 = $46.50);
B. division;
C. $9.30 ($46.50 divided by 5 = $9.30)
10. A. $0.22 ($10.56 divided by 48 = $0.22);
B. $0.24 ($12.48 divided by 52 = $0.24);
C. AquaClear

Lesson 8

1. .65
2. .12
3. .38
4. 45%
5. 5%
6. 19%
7. 12
8. 75
9. $18
10. $14.40
11. $6.72
12. 7.5
13. A. 359 × .12
B. $43.08
14. $51.75 ($45 × .15 = $6.75; $45 + $6.75 = $51.75)