



Solutions Manual

SAXONMath™
HOMESCHOOL

5/4



Hake
Saxon

Solutions Manual

SAXON MATH™

5/4

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SAXON®

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Solutions for
Lessons and Investigations

LESSON 1, WARM-UP

- a. 30
b. 44
c. 63
d. 15
e. 35
f. 18

Patterns

Final digits: 0, 2, 4, 6, 8

Not final digits: 1, 3, 5, 7, 9

LESSON 1, LESSON PRACTICE

- a. $5 + 6 = 11$
b. $6 + 5 = 11$
c. $8 + 0 = 8$
d. $4 + 8 + 6 = 18$
e. $4 + 5 + 6 = 15$
f. Pattern: Some + some more = total
Problem: 5 laps + 8 laps = **13 laps**
g. $2 + 4 = 6$
 $4 + 2 = 6$
h. $1 + 3 + 5 = 9,$
 $1 + 5 + 3 = 9,$
 $3 + 1 + 5 = 9,$
 $3 + 5 + 1 = 9,$
 $5 + 1 + 3 = 9,$
 $5 + 3 + 1 = 9$
i. Since $7 + 3 = 10$, $N = 3$
j. Since $4 + 8 = 12$, $A = 4$

LESSON 1, MIXED PRACTICE

1. Pattern: Some
 + Some more
 Total
Problem: 5 singers
 + 7 singers
 12 singers
2. Pattern: Some + some more = total
Problem: 6 coins + 3 coins = **9 coins**
3. $9 + 4 = 13$
4. $8 + 2 = 10$
5. 4
 + 5
 9
 N = 5
6. 3
 + 5
 8
 W = 3
7. 6
 + 2
 8
 P = 2
8. 0
 + 8
 8
 Q = 0
9. $3 + 4 + 5 = 12$
10. $4 + 4 + 4 = 12$
11. $6 + 4 = 10$
 R = 4
12. $1 + 5 = 6$
 X = 1
13. 5
 5
 + 5
 15

14.
$$\begin{array}{r} 8 \\ 0 \\ + 7 \\ \hline 15 \end{array}$$

15.
$$\begin{array}{r} 6 \\ 5 \\ + 4 \\ \hline 15 \end{array}$$

16.
$$\begin{array}{r} 9 \\ 9 \\ + 9 \\ \hline 27 \end{array}$$

17.
$$\begin{array}{r} 1 \\ + 9 \\ \hline 10 \end{array}$$

 $M = 1$

18.
$$\begin{array}{r} 9 \\ + 3 \\ \hline 12 \end{array}$$

 $F = 3$

19.
$$\begin{array}{r} 5 \\ + 5 \\ \hline 10 \end{array}$$

 $Z = 5$

20.
$$\begin{array}{r} 0 \\ + 3 \\ \hline 3 \end{array}$$

 $N = 3$

21. $3 + 2 + 5 + 4 + 6 = 20$

22. $2 + 2 + 2 + 2 + 2 + 2 + 2 = 14$

23. $6 + 3 = 9$ or $3 + 6 = 9$

24. One possibility: $4 + 5 + 2 = 11$

25. $2 + 3 + 4 = 9,$
 $2 + 4 + 3 = 9,$
 $3 + 2 + 4 = 9,$
 $3 + 4 + 2 = 9,$
 $4 + 2 + 3 = 9,$
 $4 + 3 + 2 = 9$

26. B. 7

LESSON 2, WARM-UP

- a. 50
- b. 36
- c. 49
- d. 17
- e. 19
- f. 73

Patterns

Final digits: 0, 5

Numbers in both lists: 10, 20, 30, 40, 50,
60, 70, 80, 90, 100

LESSON 2, LESSON PRACTICE

- a. $10 + A = 17$
 $10 + 7 = 17$
 $A = 7$
- b. $B + 11 = 12$
 $1 + 11 = 12$
 $B = 1$
- c. $14 + C = 20$
 $14 + 6 = 20$
 $C = 6$

LESSON 2, MIXED PRACTICE

- 1. Pattern: Some + some more = total
 Problem: 5 carrots + 6 carrots = 11 carrots
- 2. Pattern: Some + some more = total
 Problem: 7 miles + 4 miles = 11 miles
- 3. $9 + 4 = 13$
 $N = 4$
- 4. $7 + 8 = 15$

$$\begin{array}{r} 5. \quad 7 \\ + 6 \\ \hline 13 \\ P = 7 \end{array}$$

$$\begin{array}{r} 6. \quad 7 \\ + 5 \\ \hline 12 \\ W = 5 \end{array}$$

$$\begin{array}{r} 7. \quad 4 \\ \quad 8 \\ + 5 \\ \hline 17 \end{array}$$

$$\begin{array}{r} 8. \quad 9 \\ \quad 3 \\ + 7 \\ \hline 19 \end{array}$$

$$\begin{array}{r} 9. \quad 11 \\ + 5 \\ \hline 16 \\ B = 5 \end{array}$$

$$\begin{array}{r} 10. \quad 9 \\ \quad 7 \\ + 3 \\ \hline 19 \end{array}$$

$$\begin{array}{r} 11. \quad 2 \\ \quad 6 \\ + 9 \\ \hline 17 \end{array}$$

$$\begin{array}{r} 12. \quad 3 \\ \quad 8 \\ + 2 \\ \hline 13 \end{array}$$

$$\begin{array}{r} 13. \quad 9 \\ \quad 5 \\ + 3 \\ \hline 17 \end{array}$$

$$\begin{array}{r} 14. \quad 6 \\ + 3 \\ \hline 9 \\ M = 3 \end{array}$$

$$\begin{array}{r} 15. \quad 8 \\ + 1 \\ \hline 9 \\ Q = 1 \end{array}$$

$$\begin{array}{r} 16. \quad 5 \\ + 2 \\ \hline 7 \\ R = 2 \end{array}$$

$$\begin{array}{r} 17. \quad 8 \\ + 2 \\ \hline 10 \\ T = 2 \end{array}$$

$$\begin{array}{r} 18. \quad 8 \\ \quad 4 \\ + 6 \\ \hline 18 \end{array}$$

$$\begin{array}{r} 19. \quad 9 \\ + 2 \\ \hline 11 \\ X = 2 \end{array}$$

$$\begin{array}{r} 20. \quad 5 \\ \quad 2 \\ + 6 \\ \hline 13 \end{array}$$

$$21. \quad 20 + 3 = 23 \\ X = 3$$

$$22. \quad 4 + 5 + 6 = 15, \\ 4 + 6 + 5 = 15, \\ 5 + 4 + 6 = 15, \\ 5 + 6 + 4 = 15, \\ 6 + 4 + 5 = 15, \\ 6 + 5 + 4 = 15$$

$$23. \quad 4 + 3 = 7 \text{ or } 3 + 4 = 7$$

$$24. \quad 5 + 2 = 7 \text{ or } 2 + 5 = 7$$

$$25. \quad \text{One possibility: } 4 + 2 + 5 = 11$$

$$26. \quad A. 4$$

LESSON 3, WARM-UP

- a. 40
- b. 43
- c. 53
- d. 54
- e. 80
- f. 75
- g. 35; 42; 64

Vocabulary

$$\begin{array}{r}
 \boxed{\text{addend}} + \boxed{\text{addend}} = \boxed{\text{sum}} \\
 \boxed{\text{addend}} \\
 + \boxed{\text{addend}} \\
 \hline
 \boxed{\text{sum}}
 \end{array}$$

LESSON 3, LESSON PRACTICE

- a. The rule is "Count down by ones."
6, 5, 4
- b. The rule is "Count up by threes."
15, 18, 21
- c. The rule is "Count down by tens."
60
- d. The rule is "Count up by fours."
12
- e. 2 digits
- f. 4 digits
- g. 10 digits
- h. 9
- i. 1
- j. 0

LESSON 3, MIXED PRACTICE

1. Pattern: Some
Some more
+ Some more
Total

Problem: 5 dollars
6 dollars
+ 7 dollars
18 dollars
2. Pattern: Some + some more = total
Problem: 9 songs + 8 songs = **17 songs**
3. (a) **3 digits**
(b) **3 digits**
(c) **9 digits**
4. (a) 7
(b) 0
(c) 9
5. $9 + 3 = 12$
 $M = 3$
6. $10 + 6 = 16$
 $W = 6$
7. The rule is "Count up by tens."
40
8. The rule is "Count down by ones."
19
9. The rule is "Count down by fives."
20
10. The rule is "Count up by tens."
100
11. The rule is "Count up by sixes."
24, 30, 36
12. The rule is "Count up by threes."
12, 15, 18
13. The rule is "Count up by fours."
16, 20, 24

LESSON 4, WARM-UP

14. The rule is "Count down by nines."
18, 9, 0
15. The rule is "Count up by fours."
16
16. The rule is "Count up by sixes."
24
17. The rule is "Count down by fives."
20
18. The rule is "Count up by threes."
12
19. 2, 4, 6, 8, 10, 12, 14, 16
16 small rectangles
20. 4, 8, 12, 16, 20, 24
24 X's
21. One possibility: $3 + 6 + 4 = 13$

22.

$$\begin{array}{r} 4 \\ 8 \\ 7 \\ + 5 \\ \hline 24 \end{array}$$

23.

$$\begin{array}{r} 9 \\ 5 \\ 7 \\ + 8 \\ \hline 29 \end{array}$$

24.

$$\begin{array}{r} 8 \\ 4 \\ 7 \\ + 2 \\ \hline 21 \end{array}$$

25.

$$\begin{array}{r} 2 \\ 9 \\ 7 \\ + 5 \\ \hline 23 \end{array}$$

26. D. 7

- a. 76
- b. 49
- c. 86
- d. 68
- e. 26
- f. 70
- g. 75; 48; 67

Problem Solving

Number of Coins

Left	Right
0	9
1	8
2	7
3	6
4	5
5	4
6	3
7	2
8	1
9	0

LESSON 4, LESSON PRACTICE

a.

2 hundreds 3 tens 1 one

b.

2 hundreds 1 ten 3 ones

\$213 is less than \$231

- c. (a) Ones
(b) Tens
(c) Hundreds

d. 523

LESSON 4, MIXED PRACTICE

1. Pattern: Some
 Some more
 Some more
 + Some more

 Total

Problem: 3 cards
 4 cards
 5 cards
 + 1 cards

 13 cards

2. $6 + 6 = 12$

3. 5¢, 10¢, 15¢, 20¢
 20 cents

4. 4
 + 8

 12
 N = 8

5. 4
 5
 + 3

 12

6. 13
 + 6

 19
 Y = 6

7. 7
 + 7

 14
 S = 7

8. $9 + 3 = 12$
 N = 3

9. $3 + 5 = 8$
 N = 3

10. The rule is "Count up by threes."
 18, 21, 24


11. The rule is "Count down by sixes."
 12, 6, 0

12. The rule is "Count up by fours."
 24, 28, 32

13. The rule is "Count down by sevens."
 14, 7, 0

14. (a) 5 digits
 (b) 7 digits
 (c) 6 digits

15. (a) 4
 (b) 7
 (c) 3

16. 
 3 hundreds 4 tens 2 ones

17. 4 hundreds, 3 tens, 4 ones
 \$434

18. The rule is "Count up by sixes."
 30

19. The rule is "Count down by fours."
 28

20. 2, 4, 6, 8, 10, 12, 14, 16, 18, 20
 20 ears

21. Tens

22. $5 + 6 = 11$ or $6 + 5 = 11$

23. $16 + 4 = 20$
 N = 4

24. $19 + 6 = 25$
 B = 6

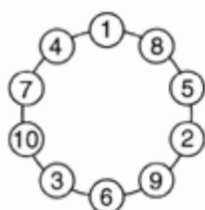
25. $6 + 7 + 8 = 21,$
 $6 + 8 + 7 = 21,$
 $7 + 6 + 8 = 21,$
 $7 + 8 + 6 = 21,$
 $8 + 6 + 7 = 21,$
 $8 + 7 + 6 = 21$

26. A. 1

LESSON 5, WARM-UP

- a. 84
- b. 46
- c. 92
- d. 63
- e. 90
- f. 27; 86; 53

Patterns



LESSON 5, LESSON PRACTICE

- a.

Kiyoko	Kayla
third	eighth

4 people
- b. Sample answer: 5/12/1993
- c. 7/4/(year)

LESSON 5, MIXED PRACTICE

- 1. Pattern:

Some
Some more
+ Some more
Total

Problem:

5 people
6 people
+ 4 people
15 people

2.
$$\begin{array}{r} 8 \\ + 7 \\ \hline 15 \\ X = 7 \end{array}$$

3.
$$\begin{array}{r} 8 \\ + 6 \\ \hline 14 \\ Y = 6 \end{array}$$

4.
$$\begin{array}{r} 8 \\ + 4 \\ \hline 12 \\ Z = 4 \end{array}$$

5.
$$\begin{array}{r} 7 \\ + 6 \\ \hline 13 \\ N = 6 \end{array}$$

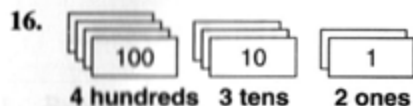
6.
$$\begin{array}{r} 7 \\ + 3 \\ \hline 10 \\ W = 3 \end{array}$$

7.
$$\begin{array}{r} 2 \\ + 5 \\ \hline 7 \\ A = 5 \end{array}$$

8.
$$\begin{array}{r} 6 \\ + 5 \\ \hline 11 \\ R = 6 \end{array}$$

9.
$$\begin{array}{r} 3 \\ + 2 \\ \hline 5 \\ T = 2 \end{array}$$

- 10. August 15, 1993
- 11. The rule is "Count up by threes."
21, 24, 27
- 12. The rule is "Count up by fours."
28, 32, 36
- 13. The rule is "Count up by sevens."
49, 56, 63
- 14. The rule is "Count up by sixes."
36
- 15. The rule is "Count up by fives."
35



17. $5 + 5 + 5 = 15$

18. Hundreds

19. 235

20. The rule is "Count up by threes."
3, 6, 9, 12

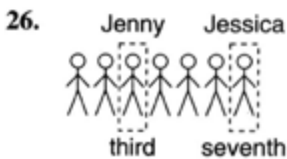
21. 2, 4, 6, 8, 10, 12, 14
14 eyes

22.
$$\begin{array}{r} 5 \\ 8 \\ 4 \\ 7 \\ 4 \\ + 3 \\ \hline 31 \end{array}$$

23.
$$\begin{array}{r} 5 \\ 7 \\ 3 \\ 8 \\ 4 \\ + 2 \\ \hline 29 \end{array}$$

24.
$$\begin{array}{r} 9 \\ 7 \\ 6 \\ 5 \\ 4 \\ + 2 \\ \hline 33 \end{array}$$

25.
$$\begin{array}{r} 8 \\ 7 \\ 3 \\ 5 \\ 4 \\ + 9 \\ \hline 36 \end{array}$$



A. 3

a. 43

b. 42

c. 56

d. 55

e. 75

f. 74

Problem Solving

Number of Coins

Left	Right
2	7
3	6
4	5
5	4
6	3
7	2

LESSON 6, LESSON PRACTICE

a.
$$\begin{array}{r} 14 \\ - 8 \\ \hline 6 \end{array}$$
 check: $6 + 8 = 14$

b.
$$\begin{array}{r} 9 \\ - 3 \\ \hline 6 \end{array}$$
 check: $6 + 3 = 9$

c.
$$\begin{array}{r} 15 \\ - 7 \\ \hline 8 \end{array}$$
 check: $8 + 7 = 15$

d.
$$\begin{array}{r} 11 \\ - 4 \\ \hline 7 \end{array}$$
 check: $7 + 4 = 11$

e.
$$\begin{array}{r} 12 \\ - 5 \\ \hline 7 \end{array}$$
 check: $7 + 5 = 12$

f.
$$\begin{array}{l} 5 + 6 = 11 \\ 6 + 5 = 11 \\ 11 - 6 = 5 \\ 11 - 5 = 6 \end{array}$$

- g. **Sample answer:** We can check a subtraction answer by adding the difference to the number subtracted. For example, we can check $7 - 3 = 4$ by adding $4 + 3 = 7$.

LESSON 6, MIXED PRACTICE

1.
$$\begin{array}{r} 14 \\ - 5 \\ \hline 9 \end{array}$$

2.
$$\begin{array}{r} 15 \\ - 8 \\ \hline 7 \end{array}$$

3.
$$\begin{array}{r} 9 \\ - 4 \\ \hline 5 \end{array}$$

4.
$$\begin{array}{r} 11 \\ - 7 \\ \hline 4 \end{array}$$

5.
$$\begin{array}{r} 12 \\ - 8 \\ \hline 4 \end{array}$$

6.
$$\begin{array}{r} 11 \\ - 6 \\ \hline 5 \end{array}$$

7.
$$\begin{array}{r} 15 \\ - 7 \\ \hline 8 \end{array}$$

8.
$$\begin{array}{r} 9 \\ - 6 \\ \hline 3 \end{array}$$

9.
$$\begin{array}{r} 13 \\ - 5 \\ \hline 8 \end{array}$$

10.
$$\begin{array}{r} 12 \\ - 6 \\ \hline 6 \end{array}$$

11.
$$\begin{array}{r} 8 \\ + 9 \\ \hline 17 \\ N = 9 \end{array}$$

12.
$$\begin{array}{r} 6 \\ + 8 \\ \hline 14 \\ A = 6 \end{array}$$

13. $3 + 8 = 11$
 $W = 8$

14. $5 + 8 = 13$
 $M = 8$

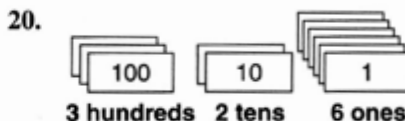
15. $4 + 6 = 10$
 $6 + 4 = 10$
 $10 - 4 = 6$
 $10 - 6 = 4$

16. The rule is "Count up by twos."
22, 24, 26

17. The rule is "Count up by sevens."
42, 49, 56

18. The rule is "Count up by fours."
32, 36, 40

19. The tenth month of the year is October.
October has **31 days**.



21. **Ones**

22. $6 + 7 = 13$
 $N = 7$

23. $8 + 8 = 16$
 $A = 8$

24. $17 + 3 = 20$
 $M = 3$

25. $3 + 4 + 5 = 12,$
 $3 + 5 + 4 = 12,$
 $4 + 3 + 5 = 12,$
 $4 + 5 + 3 = 12,$
 $5 + 3 + 4 = 12,$
 $5 + 4 + 3 = 12$

26. Pattern: Some
 + Some more

 Total

Problem: 2 children
 + 3 children

 5 children

C. $2 + 3 = 5$

LESSON 7, WARM-UP

- a. 37
- b. 53
- c. 96
- d. 83
- e. 96
- f. 68

Patterns

- (a) Since 24 months after January is January, 25 months after January is **February**.
- (b) Twenty-four months before Valentine's Day is in February. Twenty-two months before Valentine's Day is two months after that, which is **April**.

LESSON 7, LESSON PRACTICE

- a. Zero
- b. Eighty-one
- c. Ninety-nine
- d. Five hundred fifteen
- e. Four hundred forty-four
- f. Nine hundred nine
- g. 19
- h. 91

i. 524

j. 860

- k. One hundred, three tens, and two ones is 132.
One hundred thirty-two

LESSON 7, MIXED PRACTICE

- 1. Pattern: Some + some more = total
 Problem: 8 dollars + 6 dollars = **14 dollars**
- 2. Pattern: Some + some more = total
 Problem: 8 ounces + 8 ounces = **16 ounces**
- 3. $7 + 4 = 11$
 $N = 4$
- 4. $8 + 7 = 15$
 $N = 7$
- 5.
$$\begin{array}{r} 13 \\ - 5 \\ \hline 8 \end{array}$$
- 6.
$$\begin{array}{r} 16 \\ - 8 \\ \hline 8 \end{array}$$
- 7.
$$\begin{array}{r} 13 \\ - 7 \\ \hline 6 \end{array}$$
- 8.
$$\begin{array}{r} 12 \\ - 8 \\ \hline 4 \end{array}$$
- 9. 214
- 10. 532
- 11. Three hundred one
- 12. Three hundred twenty
- 13. Three hundreds, one ten, and two ones is 312.
Three hundred twelve

14. $3 + 5 = 8$ or $5 + 3 = 8$

15. The rule is "Count up by sixes."
30, 36, 42

16. The rule is "Count up by threes."
24, 27, 30

17. The rule is "Count up by sevens."
49

18. The rule is "Count up by eights."
48

19. 3 hundreds, 0 tens, 3 ones
\$303

20. $7 + 8 = 15$
 $8 + 7 = 15$
 $15 - 7 = 8$
 $15 - 8 = 7$



22. 5¢, 10¢, 15¢, 20¢, 25¢, 30¢
30 cents

23. $4 + 7 + 8 + 5 + 4 = 28$

24. $2 + 3 + 5 + 8 + 5 = 23$

25. $5 + 8 + 6 + 4 + 3 + 7 + 2 = 35$

26. $12 - 5 = 7$ is a subtraction fact for the fact family 5, 7, and 12.
 $7 + 5 = 12$ is an addition fact for the fact family 5, 7, and 12.
A. $7 + 5 = 12$

c. 57

d. 94

e. 90

f. 89

Problem Solving

Number of Coins

Left	Right
2	7
3	6
4	5

LESSON 8, LESSON PRACTICE

a. $\begin{array}{r} \$53 \\ + \$6 \\ \hline \$59 \end{array}$

b. $\begin{array}{r} \$14 \\ + \$75 \\ \hline \$89 \end{array}$

c. $\begin{array}{r} \$36 \\ + \$42 \\ \hline \$78 \end{array}$

d. $\begin{array}{r} \$27 \\ + \$51 \\ \hline \$78 \end{array}$

e. $\begin{array}{r} \$15 \\ + \$21 \\ \hline \$36 \end{array}$

f. $\begin{array}{r} \$32 \\ + \$6 \\ \hline \$38 \end{array}$

LESSON 8, WARM-UP

a. 65

b. 72

LESSON 8, MIXED PRACTICE

1. 343

2. 307

SOLUTIONS

3. Five hundred ninety-two

$$\begin{array}{r} 4. \quad 6 \\ + 6 \\ \hline 12 \\ N = 6 \end{array}$$

$$\begin{array}{r} 5. \quad 7 \\ + 3 \\ \hline 10 \\ R = 3 \end{array}$$

$$\begin{array}{r} 6. \quad 8 \\ + 6 \\ \hline 14 \\ T = 6 \end{array}$$

$$\begin{array}{r} 7. \quad 8 \\ + 5 \\ \hline 13 \\ N = 5 \end{array}$$

$$\begin{array}{r} 8. \quad \$25 \\ + \$14 \\ \hline \$39 \end{array}$$

$$\begin{array}{r} 9. \quad \$85 \\ + \$14 \\ \hline \$99 \end{array}$$

$$\begin{array}{r} 10. \quad \$22 \\ + \$6 \\ \hline \$28 \end{array}$$

$$\begin{array}{r} 11. \quad \$40 \\ + \$38 \\ \hline \$78 \end{array}$$

$$\begin{array}{r} 12. \quad 13 \\ - 9 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 13. \quad 17 \\ - 5 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 14. \quad 17 \\ - 8 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 15. \quad 14 \\ - 6 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 16. \text{ Pattern: } \quad \text{Some} \\ \quad \quad \quad + \text{ Some more} \\ \quad \quad \quad \hline \quad \quad \quad \text{Total} \end{array}$$

$$\begin{array}{r} \text{Problem: } \quad \$23 \\ \quad \quad \quad + \$42 \\ \quad \quad \quad \hline \quad \quad \quad \$65 \end{array}$$

17. One hundred and eight ones is 108.
One hundred eight

18. 8/5/94

19. The rule is "Count up by threes."
21, 24, 27

20. The rule is "Count up by sevens."
49, 56, 63

$$\begin{array}{r} 21. \quad 5 \\ \quad \quad 8 \\ \quad \quad 7 \\ \quad \quad 6 \\ \quad \quad 4 \\ \quad \quad \hline \quad \quad 33 \end{array}$$

$$\begin{array}{r} 22. \quad 9 \\ \quad \quad 7 \\ \quad \quad 6 \\ \quad \quad 4 \\ \quad \quad 8 \\ \quad \quad \hline \quad \quad 41 \end{array}$$

$$\begin{array}{r} 23. \quad 2 \\ \quad \quad 5 \\ \quad \quad 7 \\ \quad \quad 3 \\ \quad \quad 5 \\ \quad \quad \hline \quad \quad 26 \end{array}$$

$$\begin{array}{l} 24. \quad 5 + 6 + 7 = 18, \\ \quad \quad 5 + 7 + 6 = 18, \\ \quad \quad 6 + 5 + 7 = 18, \\ \quad \quad 6 + 7 + 5 = 18, \\ \quad \quad 7 + 5 + 6 = 18, \\ \quad \quad 7 + 6 + 5 = 18 \end{array}$$

25. $7 + 8 = 15$
 $8 + 7 = 15$
 $15 - 7 = 8$
 $15 - 8 = 7$

26. $7 + \blacklozenge = 15$
 $7 + 8 = 15$, so $\blacklozenge = 8$
 $8 - 7 \neq 15$, so $\blacklozenge - 7 = 15$ is not true
 A. $\blacklozenge - 7 = 15$

d.
$$\begin{array}{r} ^1 \\ 68 \\ + 24 \\ \hline 92 \end{array}$$

e.
$$\begin{array}{r} ^1 \\ \$59 \\ + \$8 \\ \hline \$67 \end{array}$$

f.
$$\begin{array}{r} ^1 \\ 46 \\ + 25 \\ \hline 71 \end{array}$$

LESSON 9, WARM-UP

- a. 56
- b. 55
- c. 67
- d. 66
- e. 44
- f. 43

Patterns

10 days after Saturday: Count forward by 7 days and then by 3 days: **Tuesday**.

10 days before Saturday: Count backward by 7 days and then by 3 days: **Wednesday**.

70 days after Saturday: Count up by 7's to 70. There are no days "left over," so 70 days after Saturday is **Saturday**.

LESSON 9, LESSON PRACTICE

a.
$$\begin{array}{r} ^1 \\ \$36 \\ + \$29 \\ \hline \$65 \end{array}$$

b.
$$\begin{array}{r} ^1 \\ \$47 \\ + \$8 \\ \hline \$55 \end{array}$$

c.
$$\begin{array}{r} ^1 \\ \$57 \\ + \$13 \\ \hline \$70 \end{array}$$

LESSON 9, MIXED PRACTICE

- 1. 613
- 2. 901
- 3. Nine hundred forty-one

4.
$$\begin{array}{r} 6 \\ + 5 \\ \hline 11 \\ F = 5 \end{array}$$

5.
$$\begin{array}{r} 7 \\ + 6 \\ \hline 13 \\ G = 6 \end{array}$$

6.
$$\begin{array}{r} 4 \\ + 11 \\ \hline 15 \\ H = 4 \end{array}$$

7.
$$\begin{array}{r} 9 \\ + 7 \\ \hline 16 \\ N = 7 \end{array}$$

8.
$$\begin{array}{r} ^1 \\ 33 \\ + 8 \\ \hline 41 \end{array}$$

9.
$$\begin{array}{r} ^1 \\ \$47 \\ + \$18 \\ \hline \$65 \end{array}$$

$$\begin{array}{r} 10. \quad \overset{1}{27} \\ + 69 \\ \hline 96 \end{array}$$

$$\begin{array}{r} 11. \quad \overset{1}{\$49} \\ + \$25 \\ \hline \$74 \end{array}$$

$$\begin{array}{r} 12. \quad 17 \\ - 8 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 13. \quad 12 \\ - 6 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 14. \quad 9 \\ - 7 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 15. \quad 13 \\ - 6 \\ \hline 7 \end{array}$$

16. Sum

17. Difference

18. The twelfth month is December. Two months after December is **February**.

19. The rule is "Count up by sixes."
48, 54, 60

20. The rule is "Count up by sevens."
49, 56, 63

21. 8

$$\begin{array}{r} 22. \quad \overset{1}{28} \\ + 6 \\ \hline 34 \end{array}$$

$$\begin{array}{r} 23. \quad \overset{1}{\$47} \\ + \$28 \\ \hline \$75 \end{array}$$

$$\begin{array}{r} 24. \quad \overset{1}{35} \\ + 27 \\ \hline 62 \end{array}$$

25. Pattern: $\begin{array}{r} \text{Some} \\ + \text{Some more} \\ \hline \text{Total} \end{array}$

Problem: $\begin{array}{r} \overset{1}{\$28} \\ + \$17 \\ \hline \$45 \end{array}$

$$\$28 + \$17 = \$45$$

26. One hundred and three tens is 130.

D. 130

LESSON 10, WARM-UP

- a. 37
- b. 55
- c. 52
- d. 44
- e. 65
- f. 64

Problem Solving

Terrell has 7 coins in his right pocket and 3 coins in his left pocket.

LESSON 10, LESSON PRACTICE

- a. Odd
- b. Even
- c. Odd
- d. Even
- e. 630, 632, 634, 636, 638

LESSON 10, MIXED PRACTICE

1. 542

2. 619

3. $4 + 7 = 11$
 $7 + 4 = 11$
 $11 - 4 = 7$
 $11 - 7 = 4$

4. Nine hundred three

5. Seven hundred forty-six

6. 501, 503, 505, 507, 509

7.
$$\begin{array}{r} 7 \\ + 7 \\ \hline 14 \end{array}$$

 $N = 7$

8.
$$\begin{array}{r} 7 \\ + 6 \\ \hline 13 \end{array}$$

 $P = 7$

9.
$$\begin{array}{r} 12 \\ + 2 \\ \hline 14 \end{array}$$

 $Q = 2$

10.
$$\begin{array}{r} 6 \\ + 5 \\ \hline 11 \end{array}$$

 $R = 6$

11.
$$\begin{array}{r} 15 \\ - 7 \\ \hline 8 \end{array}$$

12.
$$\begin{array}{r} 14 \\ - 7 \\ \hline 7 \end{array}$$

13.
$$\begin{array}{r} 17 \\ - 8 \\ \hline 9 \end{array}$$

14.
$$\begin{array}{r} 11 \\ - 6 \\ \hline 5 \end{array}$$

15.
$$\begin{array}{r} \$25 \\ + \$38 \\ \hline \$63 \end{array}$$

16.
$$\begin{array}{r} \$19 \\ + \$34 \\ \hline \$53 \end{array}$$

17.
$$\begin{array}{r} 42 \\ + 8 \\ \hline 50 \end{array}$$

18.
$$\begin{array}{r} 17 \\ + 49 \\ \hline 66 \end{array}$$

19. The rule is "Count up by threes."
 27, 30, 33

20. The rule is "Count up by sixes."
 6, 12, 18, 24, 30, 36, 42, 48

21. Pattern:
$$\begin{array}{r} \text{Some} \\ + \text{Some more} \\ \hline \text{Total} \end{array}$$

Problem:
$$\begin{array}{r} \$6 \\ \$12 \\ + \$20 \\ \hline \$38 \end{array}$$

$\$6 + \$12 + \$20 = \38

22. $2 + 3 + 5 + 7 + 8 + 4 + 5 = 34$

23. Sample answer: 9/22/2004 or 9/22/04

24. Two hundreds and three tens is 230.
Two hundred thirty

25. The smallest three-digit number is 100. The largest two-digit even number is the largest even number less than 100, which is 98.

26. $\Delta + 4 = 12$
 $8 + 4 = 12$, so $\Delta = 8$
 $12 + 4 \neq 8$, so $12 + 4 = \Delta$ is not true
 C. $12 + 4 = \Delta$

INVESTIGATION 1

1. 25
2. 16
3. 40
4. 85
5. (a) -15
(b) negative fifteen
6. 0, -5, -10, -15
7. -3
8. -6
9. $-3 < 1$
10. $3 > 2$
11. $2 + 3 = 3 + 2$
12. $-4 > -5$
13. Negative one is less than zero.
14. $-2 > -3$
15. $1 > -1$
16. $4 = 2 + 2$
17. $-2 < 0$
18. $4 > 1 + 2$

LESSON 11, WARM-UP

- a. 58
- b. 57

18

- c. 87
- d. 86
- e. 96
- f. 95

Problem Solving

An even number of objects can be divided into two equal groups. The stacks were of equal height, which meant the number of boxes in each stack was equal.

LESSON 11, LESSON PRACTICE

- a.
$$\begin{array}{r} 4 \text{ marigolds} \\ + N \text{ marigolds} \\ \hline 12 \text{ marigolds} \end{array}$$

 $N = 8 \text{ marigolds}$
- b.
$$\begin{array}{r} N \text{ agates} \\ + 8 \text{ agates} \\ \hline 15 \text{ agates} \end{array}$$

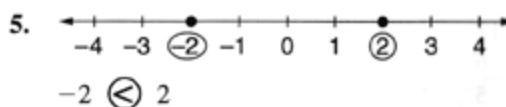
 $N = 7 \text{ agates}$

LESSON 11, MIXED PRACTICE

1. Pattern:
$$\begin{array}{r} \text{Some} \\ + \text{Some more} \\ \hline \text{Total} \end{array}$$

Problem:
$$\begin{array}{r} 4 \text{ horses} \\ + 13 \text{ horses} \\ \hline 17 \text{ horses} \end{array}$$
2. Pattern: Some + some more = total
Problem: 6 pages + N pages = 13 pages
 $N = 7$ pages
3. 642

4. $-12 < 0$



6. 571, 573, 575, 577, 579

7. (a) 15

(b) -4

8. An **even number** of objects can be separated into two equal groups.

$$\begin{array}{r} 12 \\ + 6 \\ \hline 18 \end{array}$$

$$B = 6$$

$$\begin{array}{r} 7 \\ + 8 \\ \hline 15 \end{array}$$

$$N = 7$$

$$\begin{array}{r} 11 \\ + 1 \\ \hline 12 \end{array}$$

$$A = 1$$

$$\begin{array}{r} 4 \\ + 10 \\ \hline 14 \end{array}$$

$$M = 4$$

$$\begin{array}{r} 12 \\ - 3 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 14 \\ - 7 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 12 \\ - 8 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 13 \\ - 6 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 74 \\ + 18 \\ \hline 92 \end{array}$$

$$\begin{array}{r} 93 \\ + 39 \\ \hline 132 \end{array}$$

$$\begin{array}{r} 28 \\ + 45 \\ \hline 73 \end{array}$$

$$\begin{array}{r} 28 \\ + 47 \\ \hline 75 \end{array}$$

21. The rule is "Count down by threes."
3, 0, -3

22. The rule is "Count up by sixes."
48, 54, 60

$$\begin{array}{l} 23. \quad 5 + 9 = 14 \\ \quad \quad 9 + 5 = 14 \\ \quad \quad 14 - 5 = 9 \\ \quad \quad 14 - 9 = 5 \end{array}$$

$$24. \quad 4 + 3 + 5 + 8 + 7 + 6 + 2 = 35$$

$$\begin{array}{l} 25. \quad 7 + 8 + 9 = 24, \\ \quad \quad 7 + 9 + 8 = 24, \\ \quad \quad 8 + 7 + 9 = 24, \\ \quad \quad 8 + 9 + 7 = 24, \\ \quad \quad 9 + 7 + 8 = 24, \\ \quad \quad 9 + 8 + 7 = 24 \end{array}$$

$$\begin{array}{l} 26. \quad 3 + \blacktriangle = 7 \\ \quad \quad 3 + 4 = 7, \text{ so } \blacktriangle = 4 \\ \quad \quad \blacktriangle + \blacksquare = 4 + 5 = 9 \\ \quad \quad \text{D. } 9 \end{array}$$

LESSON 12, WARM-UP

a. 81

b. 72

c. 53

d. 75

e. 76

f. 91

Patterns

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

LESSON 12, LESSON PRACTICE

a.
$$\begin{array}{r} 6 \\ + 8 \\ \hline 14 \end{array}$$
 check:
$$\begin{array}{r} 14 \\ - 8 \\ \hline 6 \end{array}$$

 $N = 8$

b.
$$\begin{array}{r} 5 \\ + 2 \\ \hline 7 \end{array}$$
 check:
$$\begin{array}{r} 7 \\ - 5 \\ \hline 2 \end{array}$$

 $N = 7$

c.
$$\begin{array}{r} 2 \\ + 7 \\ \hline 9 \end{array}$$
 check:
$$\begin{array}{r} 9 \\ - 7 \\ \hline 2 \end{array}$$

 $N = 7$

d.
$$\begin{array}{r} 5 \\ + 7 \\ \hline 12 \end{array}$$
 check:
$$\begin{array}{r} 12 \\ - 7 \\ \hline 5 \end{array}$$

 $N = 12$

LESSON 12, MIXED PRACTICE

1. Pattern: Some + some more = total
 Problem: 9 acorns + N acorns = 17 acorns
 $N = 8$ acorns

2. Pattern:
$$\begin{array}{r} \text{Some} \\ + \text{Some more} \\ \hline \text{Total} \end{array}$$

 Problem:
$$\begin{array}{r} 35 \text{ butterflies} \\ + 27 \text{ butterflies} \\ \hline 62 \text{ butterflies} \end{array}$$

3. 715

4. One hundred and four ones is 104.
One hundred four

5. 6/7/02

6. The largest three-digit number will have a 9 in the hundreds place.
946

7. 70

8.
$$\begin{array}{r} 11 \\ + 4 \\ \hline 15 \end{array}$$

 $N = 4$

9.
$$\begin{array}{r} 8 \\ + 7 \\ \hline 15 \end{array}$$

 $A = 8$

10.
$$\begin{array}{r} 9 \\ + 6 \\ \hline 15 \end{array}$$

 $N = 6$

11.
$$\begin{array}{r} 6 \\ + 9 \\ \hline 15 \end{array}$$

 $A = 9$

12.
$$\begin{array}{r} 14 \\ - 6 \\ \hline 8 \end{array}$$

 $N = 14$

13.
$$\begin{array}{r} 16 \\ - 8 \\ \hline 8 \end{array}$$

14.
$$\begin{array}{r} 14 \\ - 7 \\ \hline 7 \end{array}$$

15.
$$\begin{array}{r} 12 \\ - 5 \\ \hline 7 \end{array}$$

 $A = 5$

16.
$$\begin{array}{r} 12 \\ - 6 \\ \hline 6 \end{array}$$

 $B = 12$

17.
$$\begin{array}{r} 13 \\ - 5 \\ \hline 8 \end{array}$$

 $C = 5$

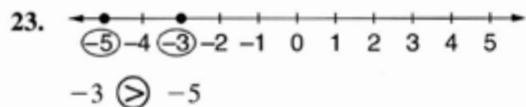
18.
$$\begin{array}{r} \$48 \\ + \$16 \\ \hline \$64 \end{array}$$

19.
$$\begin{array}{r} \$37 \\ + \$14 \\ \hline \$51 \end{array}$$

20. The rule is "Count up by sevens."
 49, 56, 63

21. The rule is "Count up by threes."
 27, 30, 33

22. 5¢, 10¢, 15¢, 20¢, 25¢, 30¢, 35¢, 40¢, 45¢



24. (a) Negative eleven
 (b) -11

25. $7 + 3 + 8 + 5 + 4 + 3 + 2 = 32$

26. B. $N - 5$

LESSON 13, WARM-UP

- a. 90
- b. 93
- c. 55
- d. 92

e. 92

f. 55

Problem Solving

Counting by 2's: 22, 24, 26, 28

Counting by 3's: 21, 24, 27

24 dominoes

LESSON 13, LESSON PRACTICE

a.
$$\begin{array}{r} \$579 \\ + \$186 \\ \hline \$765 \end{array}$$

b.
$$\begin{array}{r} 408 \\ + 243 \\ \hline 651 \end{array}$$

c.
$$\begin{array}{r} \$498 \\ + \$89 \\ \hline \$587 \end{array}$$

d.
$$\begin{array}{r} \$458 \\ + \$336 \\ \hline \$794 \end{array}$$

e.
$$\begin{array}{r} 569 \\ + 56 \\ \hline 625 \end{array}$$

LESSON 13, MIXED PRACTICE

1. Pattern:
$$\begin{array}{r} \text{Some} \\ + \text{Some more} \\ \hline \text{Total} \end{array}$$

Problem:
$$\begin{array}{r} 77 \text{ children} \\ + 19 \text{ children} \\ \hline 96 \text{ children} \end{array}$$

2. Pattern: Some + some more = total
 Problem: 5 girls + N boys = 12 children
 $N = 7$ boys

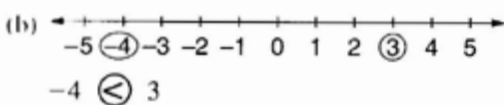
3. Nine hundred thirteen

SOLUTIONS

4. 743

5. $75 > -80$

6. (a) $413 > 314$



7. $7 + 9 = 16$

$9 + 7 = 16$

$16 - 7 = 9$

$16 - 9 = 7$

8. (a) 84

(b) -5

9.
$$\begin{array}{r} \$475 \\ + \$332 \\ \hline \$807 \end{array}$$

10.
$$\begin{array}{r} \$714 \\ + \$226 \\ \hline \$940 \end{array}$$

11.
$$\begin{array}{r} 743 \\ + 187 \\ \hline 930 \end{array}$$

12.
$$\begin{array}{r} 576 \\ + 228 \\ \hline 804 \end{array}$$

13.
$$\begin{array}{r} 13 \\ + 4 \\ \hline 17 \end{array}$$

 $K = 4$

14.
$$\begin{array}{r} 10 \\ + 5 \\ \hline 15 \end{array}$$

 $N = 5$

15.
$$\begin{array}{r} 15 \\ + 2 \\ \hline 17 \end{array}$$

 $A = 2$

16.
$$\begin{array}{r} 6 \\ + 10 \\ \hline 16 \end{array}$$

 $N = 6$

17.
$$\begin{array}{r} 8 \\ - 6 \\ \hline 2 \end{array}$$

 $N = 6$

18.
$$\begin{array}{r} 17 \\ - 8 \\ \hline 9 \end{array}$$

19.
$$\begin{array}{r} 13 \\ - 7 \\ \hline 6 \end{array}$$

20.
$$\begin{array}{r} 15 \\ - 8 \\ \hline 7 \end{array}$$

 $N = 15$

21.
$$\begin{array}{r} 14 \\ - 8 \\ \hline 6 \end{array}$$

 $N = 8$

22.
$$\begin{array}{r} 16 \\ - 7 \\ \hline 9 \end{array}$$

 $A = 7$

23.
$$\begin{array}{r} 16 \\ - 9 \\ \hline 7 \end{array}$$

 $N = 16$

24.
$$\begin{array}{r} \$49 \\ + \$76 \\ \hline \$125 \end{array}$$

25. (a) The rule is "Count up by sevens."
49, 56, 63

(b) The rule is "Count down by fives."
0, -5, -10

26. Five tens and eight ones is 58.
C. 58

LESSON 14, WARM-UP

- a. 700
- b. 900
- c. 550
- d. 92
- e. 73
- f. 77

$$\begin{array}{r} f. \quad 36 \\ + 31 \\ \hline 67 \\ M = 36 \end{array}$$

$$\begin{array}{r} g. \quad 36 \\ + 63 \\ \hline 99 \\ W = 63 \end{array}$$

$$\begin{array}{r} h. \quad 54 \\ + 45 \\ \hline 99 \\ Y = 54 \end{array}$$

Patterns

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

All shaded squares contain even numbers.

LESSON 14, LESSON PRACTICE

$$\begin{array}{r} a. \quad \$485 \\ - \$242 \\ \hline \$243 \end{array}$$

$$\begin{array}{r} b. \quad \$56 \\ - \$33 \\ \hline \$23 \end{array}$$

$$\begin{array}{r} c. \quad 97 \\ - 53 \\ \hline 44 \end{array}$$

$$\begin{array}{r} d. \quad 54 \\ - 23 \\ \hline 31 \end{array}$$

$$\begin{array}{r} e. \quad 24 \\ + 41 \\ \hline 65 \\ Q = 41 \end{array}$$

LESSON 14, MIXED PRACTICE

$$\begin{array}{r} 1. \text{ Pattern: } \quad \text{Some} \\ \quad \quad \quad + \text{ Some more} \\ \quad \quad \quad \hline \quad \quad \quad \text{Total} \end{array}$$

$$\begin{array}{r} \text{Problem: } \quad 42 \text{ red surfboards} \\ \quad \quad \quad + 17 \text{ red surfboards} \\ \quad \quad \quad \hline \quad \quad \quad 59 \text{ red surfboards} \end{array}$$

$$\begin{array}{r} 2. \text{ Pattern: } \quad \text{Some} \\ \quad \quad \quad + \text{ Some more} \\ \quad \quad \quad \hline \quad \quad \quad \text{Total} \end{array}$$

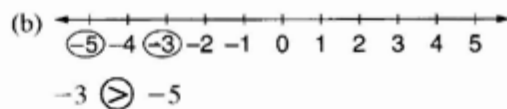
$$\begin{array}{r} \text{Problem: } \quad 4 \text{ green grasshoppers} \\ \quad \quad \quad + N \text{ green grasshoppers} \\ \quad \quad \quad \hline \quad \quad \quad 11 \text{ green grasshoppers} \\ N = 7 \text{ green grasshoppers} \end{array}$$

3. A number less than 200 has the digit 1 in the hundreds place. A number that ends with 2 is even. **132**

$$\begin{array}{l} 4. \quad 2 + 7 = 9 \\ \quad \quad 7 + 2 = 9 \\ \quad \quad 9 - 7 = 2 \\ \quad \quad 9 - 2 = 7 \end{array}$$

$$\begin{array}{r} 5. \quad 824 \\ - 713 \\ \hline 111 \end{array}$$

6. (a) $704 \otimes 407$



SOLUTIONS

7. 1st month: January = 31 days

2nd month: February = 28 days

$$\begin{array}{r} 31 \text{ days} \\ + 28 \text{ days} \\ \hline 59 \text{ days} \end{array}$$

8. 45

$$\begin{array}{r} 9. \quad \$346 \\ + \$298 \\ \hline \$644 \end{array}$$

$$\begin{array}{r} 10. \quad 499 \\ + 275 \\ \hline 774 \end{array}$$

$$\begin{array}{r} 11. \quad \$421 \\ + \$389 \\ \hline \$810 \end{array}$$

$$\begin{array}{r} 12. \quad 506 \\ + 210 \\ \hline 716 \end{array}$$

$$\begin{array}{r} 13. \quad \$438 \\ - \$206 \\ \hline \$232 \end{array}$$

$$\begin{array}{r} 14. \quad 17 \\ - 8 \\ \hline 9 \\ A = 8 \end{array}$$

$$\begin{array}{r} 15. \quad 7 \\ + 7 \\ \hline 14 \\ B = 7 \end{array}$$

$$\begin{array}{r} 16. \quad 5 \\ - 3 \\ \hline 2 \\ C = 3 \end{array}$$

$$\begin{array}{r} 17. \quad 8 \\ + 7 \\ \hline 15 \\ D = 7 \end{array}$$

$$\begin{array}{r} 18. \quad 15 \\ - 6 \\ \hline 9 \\ K = 6 \end{array}$$

$$\begin{array}{r} 19. \quad 5 \\ + 8 \\ \hline 13 \\ N = 8 \end{array}$$

$$\begin{array}{r} 20. \quad 476 \\ - 252 \\ \hline 224 \end{array}$$

$$\begin{array}{r} 21. \quad 47 \\ - 16 \\ \hline 31 \end{array}$$

$$\begin{array}{r} 22. \quad 28 \\ - 13 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 23. \quad 75 \\ + 12 \\ \hline 87 \\ T = 12 \end{array}$$

$$\begin{array}{r} 24. \quad 24 \\ + 43 \\ \hline 67 \\ E = 43 \end{array}$$

25. (a) The rule is "Count down by nines."
54, 45, 36

(b) The rule is "Count down by fours."
0, -4, -8

$$\begin{array}{l} 26. \quad \square - 7 = 2 \\ 9 - 7 = 2, \text{ so } \square = 9 \\ 7 - 9 \neq 2, \text{ so } 7 - \square = 2 \text{ is not true} \\ \text{A. } 7 - \square = 2 \end{array}$$

LESSON 15, WARM-UP

a. 900

b. 920

c. 354

SOLUTIONS

$$\begin{array}{r} 11 \\ 721 \\ + 189 \\ \hline 910 \end{array}$$

$$\begin{array}{r} 11 \\ 409 \\ + 198 \\ \hline 607 \end{array}$$

$$\begin{array}{r} 5 \\ + 7 \\ \hline 12 \end{array}$$

$D = 5$

$$\begin{array}{r} 18 \\ - 9 \\ \hline 9 \end{array}$$

$A = 9$

$$\begin{array}{r} 38 \\ + 21 \\ \hline 59 \end{array}$$

$B = 21$

$$\begin{array}{r} 5 \\ - 4 \\ \hline 1 \end{array}$$

$C = 5$

$$\begin{array}{r} \$456 \\ - \$120 \\ \hline \$336 \end{array}$$

$$\begin{array}{r} \$84 \\ - \$27 \\ \hline \$27 \end{array}$$

$$\begin{array}{r} 3 \\ 46 \\ - 28 \\ \hline 18 \end{array}$$

$$\begin{array}{r} 2 \\ 15 \\ - 16 \\ \hline 19 \end{array}$$

21. November = 30 days
December = 31 days

$$\begin{array}{r} 30 \text{ days} \\ + 31 \text{ days} \\ \hline 61 \text{ days} \end{array}$$

$$\begin{array}{l} 22. \quad 5 + 6 = 11 \\ \quad \quad 6 + 5 = 11 \\ \quad \quad 11 - 6 = 5 \\ \quad \quad 11 - 5 = 6 \end{array}$$

23. $3 + 6 + 7 + 5 + 4 + 8 = 33$

24. The rule is "Count down by nines."
45, 36, 27

25. The rule is "Count down by sevens."
-28, -35, -42

26. $6 + \Delta = 10$
 $6 + 4 = 10$, so $\Delta = 4$
B. 4

LESSON 16, WARM-UP

- a. 90
- b. 900
- c. 9
- d. 55
- e. 66
- f. 73

Patterns

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

10, 20, 30, 40, 50, 60, 70, 80, 90, 100

LESSON 16, LESSON PRACTICE

a. $80 + 6$

b. $300 + 20 + 5$

c. $500 + 7$

$$\begin{array}{r} 36 \\ - 15 \\ \hline 21 \\ P = 15 \end{array}$$

$$\begin{array}{r} 47 \\ - 23 \\ \hline 24 \\ Q = 23 \end{array}$$

$$\begin{array}{r} 38 \\ - 22 \\ \hline 16 \\ M = 38 \end{array}$$

$$\begin{array}{r} 75 \\ - 32 \\ \hline 43 \\ W = 75 \end{array}$$

$$\begin{array}{r} 43 \\ - 11 \\ \hline 32 \\ X = 11 \end{array}$$

LESSON 16, MIXED PRACTICE

1. $\begin{array}{r} 23 \text{ horses} \\ + 66 \text{ horses} \\ \hline 89 \text{ horses} \end{array}$

2. Pattern: $\begin{array}{r} \text{Some} \\ + \text{Some more} \\ \hline \text{Total} \end{array}$

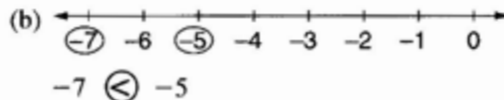
Problem: $\begin{array}{r} 375 \text{ bats} \\ + 107 \text{ bats} \\ \hline 482 \text{ bats} \end{array}$

3. $22 + 33 = 55$
 $33 + 22 = 55$
 $55 - 22 = 33$
 $55 - 33 = 22$

4. $700 + 80 + 2$

5. The smallest three-digit number is 100.
 The number 100 is even.
100

6. (a) $918 > 819$



7. There are 7 days in one week. Count by sevens six times: 7, 14, 21, 28, 36, 42.
42 days

8. **475**

$$\begin{array}{r} 11 \\ \$576 \\ + \$128 \\ \hline \$704 \end{array}$$

$$\begin{array}{r} 11 \\ \$243 \\ + \$578 \\ \hline \$821 \end{array}$$

$$\begin{array}{r} 11 \\ 186 \\ + 285 \\ \hline 471 \end{array}$$

$$\begin{array}{r} 11 \\ 329 \\ + 186 \\ \hline 515 \end{array}$$

$$\begin{array}{r} 5 \\ + 12 \\ \hline 17 \\ D = 5 \end{array}$$

$$\begin{array}{r} 17 \\ - 8 \\ \hline 9 \\ A = 8 \end{array}$$

$$\begin{array}{r} 8 \\ + 6 \\ \hline 14 \\ B = 6 \end{array}$$

$$16. \begin{array}{r} 9 \\ - 7 \\ \hline 2 \\ C = 9 \end{array}$$

$$17. \begin{array}{r} 2^1 5 \\ - 19 \\ \hline 6 \end{array}$$

$$18. \begin{array}{r} 3^1 2 \\ - 28 \\ \hline 14 \end{array}$$

$$19. \begin{array}{r} 3^1 6 \\ - 18 \\ \hline 28 \end{array}$$

$$20. \begin{array}{r} 3^1 2 \\ - 16 \\ \hline 26 \end{array}$$

$$21. \begin{array}{r} 68 \\ - 34 \\ \hline 34 \\ D = 34 \end{array}$$

$$22. \begin{array}{r} 49 \\ - 34 \\ \hline 15 \\ B = 49 \end{array}$$

$$23. \begin{array}{r} 62 \\ - 41 \\ \hline 21 \\ H = 41 \end{array}$$

$$24. \begin{array}{r} 78 \\ - 46 \\ \hline 32 \\ L = 78 \end{array}$$

25. (a) The rule is "Count up by fours."
28, 32, 36

(b) The rule is "Count down by fours."
4, 0, -4

26. $N - 3 = 6$
 $9 - 3 = 6$, so $N = 9$
 $6 - 3 \neq 9$, so $6 - 3 = N$ is not true
C. $6 - 3 = N$

a. 900

b. 540

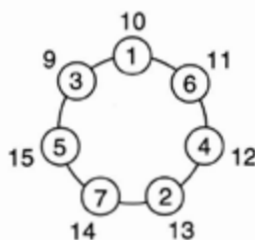
c. 65

d. 84

e. 95

f. 73

Patterns



The pattern inside the circles is "1, skip, skip, 2, etc." Outside the circles the numbers count up by one from 9 to 15, starting at the upper left.

LESSON 17, LESSON PRACTICE

$$a. \begin{array}{r} 2 \\ 47 \\ 29 \\ 46 \\ + 95 \\ \hline 217 \end{array}$$

$$b. \begin{array}{r} 2 \\ 28 \\ 47 \\ + 65 \\ \hline 140 \end{array}$$

$$c. \begin{array}{r} 1 \\ 38 \\ 22 \\ 31 \\ + 46 \\ \hline 137 \end{array}$$

$$\begin{array}{r} \text{d.} \quad \overset{11}{438} \\ \quad \quad 76 \\ + \quad \quad 5 \\ \hline \quad \quad 519 \end{array}$$

$$\begin{array}{r} \text{e.} \quad \overset{2}{15} \\ \quad \quad 24 \\ \quad \quad 11 \\ \quad \quad 25 \\ + \quad 36 \\ \hline \quad \quad 111 \end{array}$$

$$\begin{array}{r} \text{9.} \quad \overset{11}{\$378} \\ \quad + \quad \overset{11}{\$496} \\ \hline \quad \quad \overset{11}{\$874} \end{array}$$

$$\begin{array}{r} \text{10.} \quad \overset{1}{109} \\ \quad + \quad 486 \\ \hline \quad \quad 595 \end{array}$$

$$\begin{array}{r} \text{11.} \quad \overset{3}{14} \\ \quad \quad 28 \\ \quad \quad 35 \\ \quad \quad \overset{16}{16} \\ + \quad \overset{1}{227} \\ \hline \quad \quad 320 \end{array}$$

LESSON 17, MIXED PRACTICE

1. Pattern: Some
 + Some more
 Total

Problem: 24 stitches
 + N stitches
 75 stitches
 $N = 51$ stitches

2. Pattern: Some
 + Some more
 Total

Problem: 407 roses
 + 362 roses
 769 roses

3. Two hundreds are less than three hundreds, so 2 is in the hundreds place. An even number may end in 8.
298

4. $800 + 10 + 3$; eight hundred thirteen

5. The smallest two-digit number is 10.
The smallest two-digit odd number is 11.

6. -30

$$\begin{array}{r} \text{7.} \quad \overset{11}{294} \\ \quad \quad 312 \\ + \quad \quad 5 \\ \hline \quad \quad 611 \end{array}$$

$$\begin{array}{r} \text{8.} \quad \overset{11}{\$189} \\ \quad + \quad \overset{11}{\$298} \\ \hline \quad \quad \overset{11}{\$487} \end{array}$$

$$\begin{array}{r} \text{12.} \quad 14 \\ \quad - \quad 7 \\ \hline \quad \quad 7 \\ A = 7 \end{array}$$

$$\begin{array}{r} \text{13.} \quad 8 \\ \quad + \quad 6 \\ \hline \quad \quad 14 \\ B = 6 \end{array}$$

$$\begin{array}{r} \text{14.} \quad 18 \\ \quad - \quad 13 \\ \hline \quad \quad 5 \\ C = 18 \end{array}$$

$$\begin{array}{r} \text{15.} \quad 11 \\ \quad - \quad 2 \\ \hline \quad \quad 9 \\ D = 2 \end{array}$$

$$\begin{array}{r} \text{16.} \quad 13 \\ \quad - \quad 5 \\ \hline \quad \quad 8 \\ E = 13 \end{array}$$

$$\begin{array}{r} \text{17.} \quad \overset{2}{8}18 \\ \quad - \quad 29 \\ \hline \quad \quad 9 \end{array}$$

$$\begin{array}{r} \text{18.} \quad \overset{4}{8}17 \\ \quad - \quad 38 \\ \hline \quad \quad 19 \end{array}$$

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