

LESSON 21, LESSON PRACTICE

a. $4 \cdot 12 = T$

$$\begin{array}{r} 12 \text{ eggs} \\ \times 4 \text{ cartons} \\ \hline 48 \text{ eggs} \end{array}$$

b. $6N = 30$
 $30 \div 6 = 5$ desks

c. $7G = 21$
 $21 \div 7 = 3$ piles

d. $7N = 56$
 $56 \div 7 = 8$ zebus

e. See student work.

$$\begin{array}{r} ^4 ^3 \\ \$0.75 \\ \times ^6 \\ \hline \$4.50 \end{array}$$

LESSON 21, MIXED PRACTICE

1. $8p = 56$
 $56 \div 8 = 7$ students

2. $32 - 8 = t$

$$\begin{array}{r} ^2 \\ 32 \text{ ounces} \\ - 8 \text{ ounces} \\ \hline 24 \text{ ounces} \end{array}$$

3. $\$487 + M = \800

$$\begin{array}{r} ^{79} \\ \$800 \\ - \$487 \\ \hline \$313 \end{array}$$

4. 

5. $6 \times 7 = 42$
 $7 \times 6 = 42$
 $42 \div 6 = 7$
 $42 \div 7 = 6$

6. $8 \overline{)72}$

7. $42 \div 6 = 7$
 $N = 7$

8. $9 \overline{)36}$

9. $48 \div 6 = 8$
 $N = 8$

10. $56 \div 7 = 8$

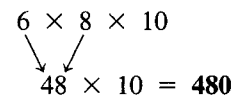
11. $\frac{70}{10} = 7$

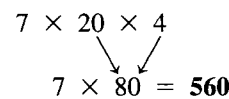
12. $24 \div 4 \text{ (}\bigcirc\text{)} 30 \div 6$
 $ $

13. $\begin{array}{r} ^{55} \\ 367 \\ \times ^8 \\ \hline 2936 \end{array}$

14. $\begin{array}{r} ^2 \\ \$5.04 \\ \times ^7 \\ \hline \$35.28 \end{array}$

15. $\begin{array}{r} ^{36} \\ 837 \\ \times ^9 \\ \hline 7533 \end{array}$

16. $6 \times 8 \times 10$

 $48 \times 10 = 480$

17. $7 \times 20 \times 4$

 $7 \times 80 = 560$

18. $\begin{array}{r} ^{39} ^9 \\ \$40.00 \\ - \$29.34 \\ \hline \$10.66 \end{array}$

19. $\begin{array}{r} ^1 \\ 4568 \\ + 6318 \\ \hline 10,886 \\ R = 10,886 \end{array}$

20. $\begin{array}{r} ^{49} ^9 \\ 5000 \\ - 876 \\ \hline 4124 \\ W = 4127 \end{array}$

SOLUTIONS

$$\begin{array}{r} 21. \quad 6 \overline{)817} \\ - 268 \\ \hline 419 \\ M = 419 \end{array}$$

$$\begin{array}{r} 22. \quad \$9.65 \\ \quad \$2.43 \\ + \$1.45 \\ \hline \$13.53 \end{array}$$

$$\begin{array}{r} 23. \quad \begin{array}{r} 21 \\ 382 \\ 96 \\ + 182 \\ \hline 660 \end{array} \end{array}$$

24. $12 \div 2 = 6$ items

25. The rule is "Count up by tens."
100, 110, 120

26. Ten divided by two

27. 60

$$\begin{array}{r} 28. \quad \begin{array}{r} 1 \\ 12 \text{ books} \\ \times 5 \text{ boxes} \\ \hline 60 \text{ books} \end{array} \end{array}$$

There were 60 books in all 5 boxes.

29. 50%

$$\begin{array}{r} \text{d.} \quad \begin{array}{r} 5 \text{ R } 3 \\ 4 \overline{)23} \\ -20 \\ \hline 3 \end{array} \end{array}$$

$$\begin{array}{r} \text{e.} \quad \begin{array}{r} 7 \text{ R } 1 \\ 7 \overline{)50} \\ -49 \\ \hline 1 \end{array} \end{array}$$

$$\begin{array}{r} \text{f.} \quad \begin{array}{r} 6 \text{ R } 4 \\ 6 \overline{)40} \\ -36 \\ \hline 4 \end{array} \end{array}$$

$$\begin{array}{r} \text{g.} \quad \begin{array}{r} 4 \text{ R } 2 \\ 10 \overline{)42} \\ -40 \\ \hline 2 \end{array} \end{array}$$

$$\begin{array}{r} \text{h.} \quad \begin{array}{r} 5 \text{ R } 5 \\ 9 \overline{)50} \\ -45 \\ \hline 5 \end{array} \end{array}$$

$$\begin{array}{r} \text{i.} \quad \begin{array}{r} 3 \text{ R } 7 \\ 9 \overline{)34} \\ -27 \\ \hline 7 \end{array} \end{array}$$

$$\text{j.} \quad 5 \overline{)44}$$

k. 30

LESSON 22, LESSON PRACTICE

$$\text{a.} \quad \begin{array}{r} 4 \text{ R } 3 \\ 5 \overline{)23} \\ -20 \\ \hline 3 \end{array}$$

$$\text{b.} \quad \begin{array}{r} 8 \text{ R } 2 \\ 6 \overline{)50} \\ -48 \\ \hline 2 \end{array}$$

$$\text{c.} \quad \begin{array}{r} 4 \text{ R } 5 \\ 8 \overline{)37} \\ -32 \\ \hline 5 \end{array}$$

LESSON 22, MIXED PRACTICE

1. \longleftrightarrow
 \longleftrightarrow

2. $4N = 32$
 $32 \div 4 = 8$ night crawlers

3. $26 - 9 = M$

$$\begin{array}{r} 2 \overline{)16} \text{ miles} \\ - 9 \text{ miles} \\ \hline 17 \text{ miles} \end{array}$$

Approximately 17 miles

4. $840 + 418 = t$

$$\begin{array}{r} 840 \text{ mice} \\ + 418 \text{ mice} \\ \hline 1258 \text{ mice} \end{array}$$

5. $5 \text{ R } 6$
 $10 \overline{)56}$
 $\underline{-50}$
 6

6. $6 \text{ R } 2$
 $3 \overline{)20}$
 $\underline{-18}$
 2

7. $4 \text{ R } 2$
 $7 \overline{)30}$
 $\underline{-28}$
 2

8. $3 \times 7 \times 10$
 $\swarrow \quad \searrow$
 $21 \times 10 = 210$

9. $2 \times 3 \times 4 \times 5$
 $\swarrow \quad \searrow \quad \swarrow \quad \searrow$
 $6 \times 20 = 120$

10. 73
 $\$394$
 $\times \quad 8$
 \hline
 $\$3152$

11. 33
 678
 $\times \quad 4$
 \hline
 2712

12. 48
 $\$6.49$
 $\times \quad 9$
 \hline
 $\$58.41$

13. $\frac{63}{7} = 9$

14. $\frac{56}{8} = 7$

15. $\frac{42}{6} = 7$

16. 5
 $\$4.08$
 $\times \quad 7$
 \hline
 $\$28.56$

17. 323
 3645
 $\times \quad 6$
 \hline
 $21,870$

18. 31
 3904
 $\times \quad 4$
 \hline
 $15,616$

19. $8 \times 0 = 4N$
 $0 = 4 \times 0$
 $N = 0$

20. 11
 548
 $+ 462$
 \hline
 1010
 $C = 1010$

21. 215
 $\$8 \cancel{0}^{15}.15$
 $-\ \$29.81$
 \hline
 $\$6.34$

22. 599
 $\cancel{600}^9$
 $-\ 963$
 \hline
 5037
 $a = 5037$

23. Twelve divided by four

24. No
 Sample answer:
 3
 $\times 2$
 \hline
 6
 $6 \div 2 = 3$

25. The rule is "Count down by ten."
 $0, -10, -20$

26. 3
 $3 \overline{)10}$
 $\underline{-9}$
 1
 1 quarter

27. $46,208 \text{ } \textcircled{>} \text{ } 46,028$

SOLUTIONS

28. Two $\frac{1}{4}$ circles

29. 25%

LESSON 23, LESSON PRACTICE

a. Answers may vary. Consider listing some for all to see.

b. B. $\frac{8}{15}$

c. $\frac{5}{8} \otimes \frac{5}{12}$

d. $\frac{12}{24} \ominus \frac{6}{12}$

LESSON 23, MIXED PRACTICE

1. $\$5.00 - \$3.48 = M$

$$\begin{array}{r} \overset{4}{\cancel{5}} \overset{9}{\cancel{0}} \\ - \$3.48 \\ \hline \$1.52 \end{array}$$

2. $\$1.45 + \$0.95 = t$

$$\begin{array}{r} \overset{1}{1} \\ \$1.45 \\ + \$0.95 \\ \hline \$2.40 \end{array}$$

3. $7 \times 52 = D$

$$\begin{array}{r} \overset{1}{5} 2 \\ \times 7 \\ \hline 364 \text{ days} \end{array}$$

4. $3d = \$24$

$\$24 \div 3 = \8

5. (a) 10 students

(b) 5 students

6. $\frac{3}{10} \otimes \frac{3}{6}$

7. $\overset{6 \text{ R } 4}{\begin{array}{r} 6 \overline{)40} \\ -36 \\ \hline 4 \end{array}}$

8. $\overset{6 \text{ R } 2}{\begin{array}{r} 3 \overline{)20} \\ -18 \\ \hline 2 \end{array}}$

9. $60 \div 10 = 6$
 $N = 6$

10. $\overset{5}{\begin{array}{r} \$3.08 \\ \times 7 \\ \hline \$21.56 \end{array}}$

11. $\overset{1 \ 1}{\begin{array}{r} 2514 \\ \times 3 \\ \hline 7542 \end{array}}$

12. $\overset{75}{\begin{array}{r} 697 \\ \times 8 \\ \hline 5576 \end{array}}$

13. Thirty-five divided by seven

14. $4 \times 3 \times 10$
 $\swarrow \quad \searrow$
 $12 \times 10 = 120$

15. $12 \times 2 \times 10$
 $\swarrow \quad \searrow$
 $24 \times 10 = 240$

16. $\overset{39 \ 2}{\begin{array}{r} 40 \cancel{2} 15 \\ - 3587 \\ \hline 448 \end{array}}$
 $S = 448$

17. $\overset{11}{\begin{array}{r} 5694 \\ + 1056 \\ \hline 6750 \end{array}}$
 $M = 6750$

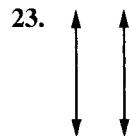
$$\begin{array}{r}
 18. \quad \overset{69}{\$70.0}^9 \\
 - \quad \underset{3}{\$7.5} \\
 \hline
 \quad \quad \quad \underset{7}{\$62.4}
 \end{array}$$

$$\begin{array}{r}
 19. \quad \overset{11}{\$5.00} \\
 \quad \quad \underset{5}{\$1.875} \\
 \quad \quad \underset{0}{\$10.00} \\
 + \quad \underset{35}{\$0.35} \\
 \hline
 \quad \quad \quad \underset{10}{\$24.10}
 \end{array}$$

$$\begin{array}{r}
 20. \quad \overset{19}{\$6.25} \\
 \quad \quad \underset{0}{\$0.85} \\
 \quad \quad \underset{0}{\$4.00} \\
 + \quad \underset{0}{D} \\
 \hline
 \quad \quad \quad \underset{90}{\$20.00} \\
 D = \text{\$8.90}
 \end{array}
 \qquad
 \begin{array}{r}
 \text{\$11.10} \\
 \overset{19}{\$20.00} \\
 - \quad \underset{0}{\$11.10} \\
 \hline
 \quad \quad \quad \underset{0}{\$8.90}
 \end{array}$$

$$\begin{array}{l}
 21. \quad 7 \times 9 = 63 \\
 \quad \quad 9 \times 7 = 63 \\
 \quad \quad 63 \div 7 = 9 \\
 \quad \quad 63 \div 9 = 7
 \end{array}$$

$$22. \quad 52, 48, 16$$



$$24. \quad \text{Two hundred twelve thousand, five hundred}$$

$$\begin{array}{l}
 25. \quad 7 + 9 = 16 \\
 \quad \quad 9 + 7 = 16 \\
 \quad \quad 16 - 7 = 9 \\
 \quad \quad 16 - 9 = 7
 \end{array}$$

$$26. \quad D. \quad \frac{80}{40}$$

$$27. \quad 75\%$$

$$\begin{array}{r}
 28. \quad \overset{24}{\$0.25} \\
 \times \quad \quad \underset{9}{9} \\
 \hline
 \quad \quad \quad \underset{25}{\$2.25} \\
 9 \times \$0.25 = \$2.25
 \end{array}$$

29. See student work; answer to question is 36.
Sample answer: There are three cartons with a dozen eggs in each. How many eggs are there total?

$$\begin{array}{r}
 12 \\
 \times \quad 3 \\
 \hline
 36 \text{ eggs}
 \end{array}$$

LESSON 24, LESSON PRACTICE

$$\begin{array}{l}
 \text{a. } 6 - (4 - 2) = \\
 \quad 6 - \quad 2 = 4
 \end{array}$$

$$\begin{array}{l}
 \text{b. } (6 - 4) - 2 = \\
 \quad 2 - 2 = 0
 \end{array}$$

$$\begin{array}{l}
 \text{c. } (8 \div 4) \div 2 = \\
 \quad 2 \div 2 = 1
 \end{array}$$

$$\begin{array}{l}
 \text{d. } 8 \div (4 \div 2) = \\
 \quad 8 \div \quad 2 = 4
 \end{array}$$

$$\begin{array}{l}
 \text{e. } 12 \div (4 - 1) = \\
 \quad 12 \div \quad 3 = 4
 \end{array}$$

$$\begin{array}{l}
 \text{f. } (12 \div 4) - 1 = \\
 \quad 3 - 1 = 2
 \end{array}$$

g. Addition, subtraction, multiplication, and division

$$\begin{array}{l}
 \text{h. } (8 \div 4) \div 2 \quad \textcircled{<} \quad 8 \div (4 \div 2) \\
 \quad 2 \div 2 \qquad \qquad \qquad 8 \div 2 \\
 \quad 1 \qquad \qquad \qquad \qquad 4
 \end{array}$$

No, the associative property does not apply.

$$\begin{array}{l}
 \text{i. } (8 - 4) - 2 \quad \textcircled{<} \quad 8 - (4 - 2) \\
 \quad 4 - 2 \qquad \qquad \qquad 8 - 2 \\
 \quad 2 \qquad \qquad \qquad \qquad 6
 \end{array}$$

No, the associative property does not apply.

$$\begin{array}{l}
 \text{j. } (8 \times 4) \times 2 \quad \textcircled{=} \quad 8 \times (4 \times 2) \\
 \quad 32 \times 2 \qquad \qquad \qquad 8 \times 8 \\
 \quad 64 \qquad \qquad \qquad \qquad 64
 \end{array}$$

Yes, the associative property applies.

SOLUTIONS

LESSON 24, MIXED PRACTICE

$$\begin{array}{r} 1. \quad \$0.50 \\ + \$0.25 \\ \hline \$0.75 \end{array}$$

2. $25 \times 4 = t$

$$\begin{array}{r} ^2 \\ 25 \text{ horses} \\ \times 4 \text{ horseshoes} \\ \hline 100 \text{ horseshoes} \end{array}$$

3. $12 - E = 9$

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

4. $98 + S = 956$

$$\begin{array}{r} ^8 ^1 \\ 98 \text{ seats} \\ - 98 \text{ seats} \\ \hline 858 \text{ seats} \end{array}$$

Addition pattern

5. $5 \times 10 = 50$
 $10 \times 5 = 50$
 $50 \div 5 = 10$
 $50 \div 10 = 5$

6. $3 \times (4 + 5) \textcircled{>} (3 \times 4) + 5$

$$\begin{array}{r} 3 \times 9 \\ 27 \end{array} \quad \begin{array}{r} 12 + 5 \\ 17 \end{array}$$

7. $30 - (20 + 10) =$
 $30 - 30 = 0$

8. $(30 - 20) + 10 =$
 $10 + 10 = 20$

9. $4 \times (6 \times 5) \textcircled{=} (4 \times 6) \times 5$

$$\begin{array}{r} 4 \times 30 \\ 120 \end{array} \quad \begin{array}{r} 24 \times 5 \\ 120 \end{array}$$

$$\begin{array}{r} 10. \quad ^8 ^R ^4 \\ 7 \overline{)60} \\ -56 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 11. \quad ^8 ^R ^2 \\ 6 \overline{)50} \\ -48 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 12. \quad ^4 ^R ^4 \\ 10 \overline{)44} \\ -40 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 13. \quad ^1 ^2 \\ \$50.36 \\ \times ^0 ^0 4 \\ \hline \$201.44 \end{array}$$

$$\begin{array}{r} 14. \quad ^2 ^4 \\ 7408 \\ \times ^0 ^0 6 \\ \hline 44,448 \end{array}$$

$$\begin{array}{r} 15. \quad ^5 ^3 ^6 \\ 4637 \\ \times ^0 ^0 9 \\ \hline 41,733 \end{array}$$

$$\begin{array}{r} 16. \quad ^1 ^1 \\ \$14.08 \\ + \$9.62 \\ \hline \$23.70 \\ W = \$23.70 \end{array}$$

$$\begin{array}{r} 17. \quad ^4 ^7 ^1 ^0 \\ - 2712 \\ \hline 2018 \\ J = 2018 \end{array}$$

$$\begin{array}{r} 18. \quad ^2 ^9 \\ \$30.00 \\ - \$0.56 \\ \hline \$29.44 \end{array}$$

$$\begin{array}{r} 19. \quad ^1 ^1 \\ \$3.54 \\ \$12.00 \\ + \$1.66 \\ \hline \$17.20 \end{array}$$

$$\begin{array}{r} 20. \quad ^1 ^9 \\ \$20.00 \\ - \$16.45 \\ \hline \$3.55 \end{array}$$

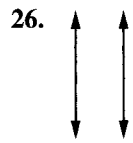
21. $5 + 9 = 14$
 $9 + 5 = 14$
 $14 - 9 = 5$
 $14 - 5 = 9$

22. 2

$$\begin{array}{r} 23. \quad \overset{1\ 2}{\$0.35} \\ \times \quad 4 \\ \hline \$1.40 \end{array}$$

24. The rule is "Count up by threes."
3, 6, 9, 12, 15, 18, 21, 24, 27, 30
30

25. B. 25
 $25 \div 5 = 5$



27. $7 \times 8 = 56$
 $8 \times 7 = 56$
 $56 \div 8 = 7$
 $56 \div 7 = 8$

28. $(8 + 4) + 2 \equiv 8 + (4 + 2)$
 $\begin{array}{ccc} 12 + 2 & & 8 + 6 \\ 14 & & 14 \end{array}$

Yes

29. a. 7

b. $\frac{7}{14}$
