

Lesson Practice 31

a.

b.

c.

d.

e.

f.

g. right

h. acute

i. obtuse

j. straight

Written Practice 31

1. a.

b.

$$2. \$5.81; \$10 - \$4.19 = m;$$

$$\begin{array}{r} \$10.00 \\ - \$4.19 \\ \hline \$5.81 \end{array}$$

$$3. 168 \text{ hours; } \begin{array}{r} 24 \text{ (hours in one day)} \\ \times 7 \text{ (days)} \\ \hline 168 \text{ hours} \end{array}$$

$$4. 48^\circ\text{F}; d + 23 = 71;$$

$$\begin{array}{r} 71 \\ - 23 \\ \hline 48^\circ\text{F} \end{array}$$

$$5. \frac{3}{7}$$

6. 1 and 19

$$7. \$6.91;$$

$$\begin{array}{r} \$10.38 \\ - \$9.47 \\ \hline \$6.91 \end{array}$$

$$8. 424;$$

$$\begin{array}{r} 1000 \\ - 576 \\ \hline 424 \end{array}$$

$$9. 56; n = \frac{280}{5}$$

$$\begin{array}{r} 56 \\ 5 \overline{)280} \\ \underline{-25} \\ 30 \\ \underline{-30} \\ 0 \end{array}$$

$$10. 38,080;$$

$$\begin{array}{r} 476 \\ \times 80 \\ \hline 38,080 \end{array}$$

$$11. \$580.80;$$

$$\begin{array}{r} \$9.68 \\ \times 60 \\ \hline \$580.80 \end{array}$$

$$12. \$2.43;$$

$$\begin{array}{r} \$2.43 \\ 8 \overline{) \$19.44} \\ \underline{-16} \\ 34 \\ \underline{-32} \\ 24 \\ \underline{-24} \\ 0 \end{array}$$

$$13. 11:30 \text{ p.m. } 12:00 - 0:30 = 11:30$$

$$14. =; \frac{1}{10} \text{ of } 100 = 10 \text{ and } \frac{1}{2} \text{ of } 20 = 10$$

$$15. 12 \text{ minutes; } 36 \div 3 = 12$$

$$16. \$48.38;$$

$$\begin{array}{r} \$96.00 \\ \$128.13 \\ + \$27.49 \\ \hline \$251.62 \end{array}$$

$$\begin{array}{l} \$251.62 + w = \$300 \\ w = \$300 - \$251.62 \end{array}$$

$$\begin{array}{r} \$300.00 \\ - \$251.62 \\ \hline \$48.38 \end{array}$$

$$17. 82;$$

$$\begin{array}{r} 328 \div (32 \div 8) \\ 328 \div 4 \\ \hline 82 \end{array}$$

$$18. 0;$$

$$\begin{array}{r} 648 - (600 + 48) \\ 648 - 648 \\ \hline 0 \end{array}$$

19. **Odd;** any odd number multiplied by 2 will result in an even number. If one is added to an even number the final number will be odd.

Solutions

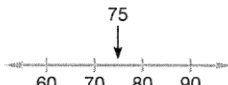
20. **B**; the last digit of 251 is 1, 1 is not divisible by 2 nor is it a factor of 5. This means that 251 does not have 2 or 5 as a factor.

21. 3:49 p.m.

22. 2

23. One hundred twenty-three thousand, four hundred

24. \$3.05;
$$\begin{array}{r} ^2 ^1 \\ \$1.35 \\ \$0.60 \\ \$0.35 \\ + \$0.75 \\ \hline \$3.05 \end{array}$$

25. 

26. 37; This answer is not correct because the $\times 8$ remainder makes the final answer 302, 296 not 300.
$$\begin{array}{r} ^1 ^2 \\ \times 8 \\ 296 \\ + 6 \\ \hline 302 \end{array}$$

27. a. 100 years

b. 50 years; $100 \div 2 = 50$ years

c. $\frac{50}{100}$

28. 15 minutes; $60 \div 4 = 15$ minutes

29. 0, -9, -18, -27; this sequence counts down. We find that the rule for this sequence is "count down by nines." Counting down by nines from 9 gives us the next four terms: 0, -9, -18, -27

30. \$14.35;
$$\begin{array}{r} ^4 ^3 \\ \$2.87 \\ \times 5 \\ \hline \$14.35 \end{array}$$

Lesson Practice 32

a. See student work; sample:



b. 4 sides



f. **Pentagon**; a pentagon has 5 sides

g. **Hexagon**; a hexagon has 6 sides

h. **Octagon**; a octagon has 8 sides

i. **Decagon**; a decagon has 10 sides 

j. See student work; the triangles should have the same shape and size.

Written Practice 32

1. rides: $\$20 \div 2 = \10
food: $\$20 \div 4 = \5
parking: $\$20 \div 10 = \2

2. 54 gallons; $18 \times 3 = t$; 54 gallons

3. 13 feet; $4l = 52$; 13 feet

4. 28 questions; $45 - 17 = q$; 28 questions

5. 3600 seconds; 1 hour has 60 minutes and each minute has 60 seconds.

$$\begin{array}{r} 60 \\ \times 60 \\ \hline 3600 \text{ seconds} \end{array}$$

6.
$$\begin{array}{r} ^2 ^1 ^2 \\ \$56.37 \\ \$34.28 \\ + \$9.75 \\ \hline \$100.40 \end{array}$$

7.
$$\begin{array}{r} ^4 ^7 \\ 5286 \\ - 4319 \\ \hline 967 \end{array}$$

8.
$$\begin{array}{r} ^3 ^9 ^9 \\ \$40.00 \\ - \$39.56 \\ \hline \$0.44 \end{array}$$

9.
$$\begin{array}{r} 67 \\ 72 \\ 43 \\ 91 \\ 48 \\ 19 \\ 648 \\ + m \\ \hline 996 \end{array} \quad 988 \longrightarrow m = 996 - 988 = 8$$

10. $234; 936 \div (36 \div 9)$
 $936 \div 4$

$$\begin{array}{r} 234 \\ 4 \overline{)936} \\ \underline{-8} \\ 13 \\ \underline{-12} \\ 16 \\ \underline{-16} \\ 0 \end{array}$$

11.
$$\begin{array}{r} 596 \\ \times 600 \\ \hline 357,600 \end{array}$$

12.
$$\begin{array}{r} \$5.82 \\ 8 \overline{) \$46.56} \\ \underline{-40} \\ 65 \\ \underline{-64} \\ 16 \\ \underline{-16} \\ 0 \end{array}$$

13.
$$\begin{array}{r} \$4.07 \\ \times 80 \\ \hline \$325.60 \end{array}$$

14. $9 \times 12 \times 0$
 $9 \times 0 = 0$

15. $133 \text{ R } 5$

$$\begin{array}{r} 7 \overline{)936} \\ \underline{-7} \\ 23 \\ \underline{-21} \\ 26 \\ \underline{-21} \\ 5 \end{array}$$

16. $\frac{60}{3} \ominus \frac{100}{5}$
 $20 = 20$

17. C

18. 1, 2, 3, 6, 9, 18; if both 18 and 36 can be divided by the number, it is a factor for both numbers

19. $\frac{3}{4}$, 75%

20. Sample: $\begin{array}{c} | \\ + \\ | \end{array}$

21. Thursday

22. Denominator

23. $9 \times 10 = 90$, $10 \times 9 = 90$, $90 \div 9 = 10$,
 $90 \div 10 = 9$

24. 690, 700, 710; this sequence counts up. We find that the rule for this sequence is "count up by tens." Counting up by tens from 680 gives us the next three terms: 690, 700, 710.

25. 37°F ; $54^\circ\text{F} - 17^\circ\text{F} = 37^\circ\text{F}$

26. Dodecagon; H

27.
$$\begin{array}{r} 57 \\ \times 7 \\ \hline 399 \\ + 1 \\ \hline 400 \end{array}$$

 400; yes, the answer is correct.

28. 250 or 520; Of the digits 0, 2, and 5, only the number 0 has both 2 and 5 as factors. This means that 0 must be the last digit of the three digit number. The two three digit numbers with both 2 and 5 as factors are 250 or 520.

29. a. 12

b. 6; $12 \div 2 = 6$

c. $\frac{6}{12}$

30.
$$\begin{array}{r} 1986 \\ + 76 \\ \hline 2062 \end{array}$$

Early Finishers

a. See student work.


b. See student work.

c. See student work.

Lesson Practice 33

- a. **70**; placing 72 on the number line, we see that it falls between 70 and 80. Since 72 is nearer to 70 than to 80 we *round down* to 70.
- b. **90**; placing 87 on the number line, we see that it falls between 80 and 90. Since 87 is nearer to 90 than to 80 we *round up* to 90.
- c. **50**; placing 49 on the number line, we see that it falls between 40 and 50. Since 49 is nearer to 50 than to 40 we *round up* to 50.
- d. **100**; placing 95 on the number line, we see that it falls between 90 and 100. Since 95 is nearer to 100 than to 90 we *round up* to 100.
- e. **700**; placing 685 on the number line, we see that it falls between 600 and 700. Since 685 is nearer to 700 than to 600 we *round up* to 700.
- f. **400**; placing 420 on the number line, we see that it falls between 400 and 500. Since 420 is nearer to 400 than to 500 we *round down* to 400.
- g. **800**; placing 776 on the number line, we see that it falls between 700 and 800. Since 776 is nearer to 800 than to 700 we *round up* to 800.
- h. **400**; placing 350 on the number line, we see that it falls between 300 and 400. Since 350 is nearer to 400 than to 300 we *round up* to 400.
- i. **About 800 people**; sample: round 96 to 100 and multiply by 8
- j. **About 1100 home runs**; round 493 to 500 and 586 to 600. Adding 500 plus 600 is 1100.

Written Practice 33

1. 

2. a. **500**; placing 537 on the number line, we see that it falls between 500 and 600. Since 537 is nearer to 500 than to 600 we *round down* to 500.

- b. **80**; placing 78 on the number line, we see that it falls between 70 and 80. Since 78 is nearer to 80 than to 70 we *round up* to 80.

$$\begin{array}{r} 3. \quad 500 \\ \times \quad 80 \\ \hline 40,000 \end{array}$$

$$\begin{array}{lcl} 4. \text{ Mammals:} & 40 \div 2 = & \mathbf{20} \\ \text{Fish:} & 40 \div 4 = & \mathbf{10} \\ \text{Reptiles:} & 40 \div 10 = & \mathbf{4} \\ \text{Birds:} & 40 - 20 - 10 - 4 & \\ & 20 - 10 - 4 & \\ & 10 - 4 = & \mathbf{6 \text{ birds}} \end{array}$$

5. **14 people**

6. Each hour has 60 minutes. $7 \times 60 = t$;
 $t = \mathbf{420}$

$$\begin{array}{r} 60 \\ \times \quad 7 \\ \hline 420 \text{ minutes} \end{array}$$

7. $m - \$7.50 = \mathbf{\$3.75}$;
 $m = \$3.75 + \7.50

$$\begin{array}{r} \$3.75 \\ + \$7.50 \\ \hline \mathbf{\$11.25} \end{array}$$

8. $400 + m = 900$;
 $m = 900 - 400 = \mathbf{\text{about 500 miles}}$

$$\begin{array}{r} 9. \quad \$34.28 \\ \quad \$9.76 \\ + \$20.84 \\ \hline \mathbf{\$64.88} \end{array}$$

$$\begin{array}{r} 10. \quad \overset{2}{3} \overset{1}{5} \overset{1}{2} 6 \\ - 1617 \\ \hline \mathbf{1909} \end{array}$$

$$\begin{array}{r} 11. \quad \overset{9}{\$10} \overset{9}{.00} \\ - \overset{9}{\$} \overset{9}{0.86} \\ \hline \mathbf{\$9.14} \end{array}$$

$$\begin{array}{r} 12. \quad \overset{4}{4} \overset{3}{9} 9 \\ \quad 25 \\ \quad 43 \\ \quad 756 \\ \quad 67 \\ \quad 94 \\ + \quad 32 \\ \hline \mathbf{1516} \end{array}$$

$$\begin{array}{r} 13. \quad 563 \\ \times 90 \\ \hline 50,670 \end{array}$$

$$\begin{array}{r} 14. \quad \$2.86 \\ \times 70 \\ \hline \$200.20 \end{array}$$

$$\begin{array}{r} 15. \quad 479 \\ \times 800 \\ \hline 383,200 \end{array}$$

$$\begin{array}{r} 16. \quad 374 \\ 3 \overline{)1122} \\ \underline{-9} \\ 22 \\ \underline{-21} \\ 12 \\ \underline{-12} \\ 0 \end{array}$$

$$\begin{array}{r} 17. \quad m = \frac{\$5.76}{6} \qquad \frac{\$0.96}{6 \overline{)5.76}} \\ \quad \underline{-54} \\ \quad 36 \\ \quad \underline{-36} \\ \quad 0 \end{array}$$

$$\begin{array}{r} 18. \quad 273 \text{ R } 5 \\ 10 \overline{)2735} \\ \underline{-20} \\ 73 \\ \underline{-70} \\ 35 \\ \underline{-30} \\ 5 \end{array}$$

$$\begin{array}{r} 19. \quad \$64.23 + \$5.96 + \$17 + (\$1 - \$0.16) \\ \$64.23 + \$5.96 + \$17 + \quad \$0.84 \end{array}$$

$$\begin{array}{r} \\ \$64.23 \\ \$ 5.96 \\ \$17.00 \\ + \$ 0.84 \\ \hline \$88.03 \end{array}$$

20. 9 months

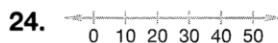
21. a. $\frac{2}{4}$ or $\frac{1}{2}$

b. 0.50

c. more than 25%; 0.5 is equal to 50%, which is more than 25%

22. C

23. 1:15 p.m.



25. 70; the sequence is "count up by sevens." The terms in the sequence are 7, 14, 21, 28, 35, 42, 49, 56, 63, and 70. The tenth term in the sequence is 70.

26. 


27. 7: 1, 7; 28: 1, 2, 4, 7, 14, 28; common factors: 1, 7;

The factors of 7 are 1 and 7.

The factors of 28 are 1, 2, 4, 7, 14, and 28.

The factors of 7 and 28 are 1 and 7.

28. C

29. a. 

b. B

30. about 200 years ago; $2008 - 1804 = 204$ or about 200 years ago

Lesson Practice 34

a. 20 R 1

$$\begin{array}{r} 3 \overline{)61} \\ \underline{-6} \\ 01 \\ \underline{-0} \\ 1 \end{array}$$

b. 40 R 2

$$\begin{array}{r} 6 \overline{)242} \\ \underline{-24} \\ 02 \\ \underline{-0} \\ 2 \end{array}$$

c. **40 R 1**

$$\begin{array}{r} 3 \overline{)121} \\ -12 \\ \hline 01 \\ -0 \\ \hline 1 \end{array}$$

d. **407**

$$\begin{array}{r} 4 \overline{)1628} \\ -16 \\ \hline 02 \\ -0 \\ \hline 28 \\ -28 \\ \hline 0 \end{array}$$

e. **30 R 2**

$$\begin{array}{r} 4 \overline{)122} \\ -12 \\ \hline 02 \\ -0 \\ \hline 2 \end{array}$$

f. **\$1.05**

$$\begin{array}{r} 5 \overline{)5.25} \\ -5 \\ \hline 02 \\ -0 \\ \hline 25 \\ -25 \\ \hline 0 \end{array}$$

g. **\$3.09**

$$\begin{array}{r} 2 \overline{)6.18} \\ -6 \\ \hline 01 \\ -0 \\ \hline 18 \\ -18 \\ \hline 0 \end{array}$$

h. **830 R 1**

$$\begin{array}{r} 6 \overline{)4981} \\ -48 \\ \hline 18 \\ -18 \\ \hline 01 \\ -0 \\ \hline 1 \end{array}$$

i. **30 R 1**

$$\begin{array}{r} 10 \overline{)301} \\ -30 \\ \hline 01 \\ -0 \\ \hline 1 \end{array}$$

j. **\$2.06**

$$\begin{array}{r} 4 \overline{)8.24} \\ -8 \\ \hline 02 \\ -0 \\ \hline 24 \\ -24 \\ \hline 0 \end{array}$$

k. **\$0.80**

$$\begin{array}{r} 7 \overline{)5.60} \\ -0 \\ \hline 56 \\ -56 \\ \hline 00 \\ -0 \\ \hline 0 \end{array}$$

l. **602 R 2**

$$\begin{array}{r} 8 \overline{)4818} \\ -48 \\ \hline 01 \\ -0 \\ \hline 18 \\ -16 \\ \hline 2 \end{array}$$

$$\begin{array}{r} m. \quad 108 \\ \times 6 \\ \hline 648 \\ + 2 \\ \hline \end{array}$$

650; the answer is correct.

n. Sample: use compatible numbers; since $490 \div 7 = 70$, a reasonable estimate is 70 sheets of paper per printer.

Written Practice **34**

1.
$$\begin{array}{c} \updownarrow \\ \leftarrow \rightarrow \end{array}$$

2. Carrots: $100 \div 2 = 50$ students
 Broccoli: $100 \div 4 = 25$ students
 Peas: $100 \div 10 = 10$ students
 Celery: $100 - 50 - 25 - 10$
 $50 - 25 - 10$
 $25 - 10 = 15$ students

3. **1949; $1849 + 100 = 1949$**

4. There are 24 hours in one day, and there are 60 minutes in each hour. $24 \times 60 = t$

$$\begin{array}{r} 24 \\ \times 60 \\ \hline 1440 \text{ minutes} \end{array}$$

5. There are 12 eggs in one dozen.

$$10 \times 12 = t = 120 \text{ eggs.}$$

6. 173 miles; $300 - 127 = 173$ miles

7. 60 R 5

$$\begin{array}{r} 6 \overline{)365} \\ -36 \\ \hline 05 \\ -0 \\ \hline 5 \end{array}$$

8. \$1.06

$$\begin{array}{r} 6 \overline{) \$6.36} \\ -6 \\ \hline 03 \\ -0 \\ \hline 36 \\ -36 \\ \hline 0 \end{array}$$

9. 107 R 1

$$\begin{array}{r} 5 \overline{)536} \\ -5 \\ \hline 03 \\ -0 \\ \hline 36 \\ -35 \\ \hline 1 \end{array}$$

10. 65 R 3

$$\begin{array}{r} 10 \overline{)653} \\ -60 \\ \hline 53 \\ -50 \\ \hline 3 \end{array}$$

11. \$1.09

$$\begin{array}{r} 4 \overline{) \$4.36} \\ -4 \\ \hline 03 \\ -0 \\ \hline 36 \\ -36 \\ \hline 0 \end{array}$$

12. $\begin{array}{r} 95 \\ \times 500 \\ \hline 47,500 \end{array}$

13. 80; placing 83 on the number line, we see that it falls between 80 and 90. Since 83 is nearer to 80 than to 90 we round down to 80.

14. $345 + 57 + 760 + 398 + 762 + 584 + w = 3000$

$$\begin{array}{r} 345 \\ 57 \\ 760 \\ 398 \\ 762 \\ + 584 \\ \hline 2906 \end{array}$$

$$2906 + w = 3000$$

$$w = 3000 - 2906 = 94$$

15. $3004 - (3000 - 4)$

$$3004 - 2996 = 8$$

16. \$5.93

$$\begin{array}{r} \times 40 \\ \hline \$237.20 \end{array}$$

17. $4 > 3$; $\frac{1}{3}$ of 12 is 4, $\frac{1}{8}$ of 24 is 3, $4 > 3$

18. \$12.00

$$\begin{array}{r} \$ 8.75 \\ + \$ 0.96 \\ \hline \$21.71 \end{array}$$

19. \$20.00

$$\begin{array}{r} - \$12.46 \\ \hline \$ 7.54 \end{array}$$

20. $8 \times 30 \times 15$

$$240 \times 15$$

$$\begin{array}{r} 240 \\ \times 15 \\ \hline 1200 \\ + 2400 \\ \hline 3600 \end{array}$$

21. $6 \times 7 \times 8 \times 9$

$$42 \times 72$$

$$\begin{array}{r} 42 \\ \times 72 \\ \hline 84 \\ + 2940 \\ \hline 3024 \end{array}$$

Solutions

22. **490, 500, 510**; this sequence counts up. We find that the rule for this sequence is "count up by tens." Counting up by tens from 480 gives us the next three terms: 490, 500, 510.

23. $\frac{1}{4}$; 0.25

24. B

25. 9:52 a.m.

26. A and D

27.
$$\begin{array}{r} 84 \\ \times 9 \\ \hline 756 \\ + 8 \\ \hline 764 \end{array}$$
 The answer is correct.

28. Both K'Mara and Mateo are correct since the Associative Property applies to multiplication.

29. C; 600 is a multiple of 10, so dividing 600 by 10 will not leave a remainder

30. 40 hours; sample: use rounding; since 7 hours and 45 minutes is about 8 hours, the employee works about 8×5 or 40 hours each week.

Lesson Practice 35

- a. $17 - s = 4$; 13 girls; $17 - 13 = 4$
- b. $l - 3800 = 400$; 4200 feet;
 $4200 - 3800 = 400$
- c. $1448 - 1120 = d$; 328 kilometers;
 $1448 - 1120 = 328$
- d. $1776 - 1215 = d$; 561 years;
 $1776 - 1215 = 561$
- e.
$$\begin{array}{r} \text{later} \\ - \text{earlier} \\ \hline \text{difference} \end{array} \rightarrow \begin{array}{r} 8:05 \text{ pm} \\ - 6:50 \text{ pm} \\ \hline d \end{array} \rightarrow \begin{array}{r} 19 \text{ } 6 \\ 20:05 \\ - 18:50 \\ \hline 1:15 \text{ minutes} \end{array}$$

Written Practice 35

1. \times
2. 342; $109 + 98 + 135 = t$; use compatible numbers; $100 + 100 + 130 = 330$

3. **55 inches**; $63 - s = 8$; $s = 63 - 8 = 55$ inches

4. **100 years**; $1986 - 1886 = d$; $d = 100$ years

5. \$60.00;
$$\begin{array}{r} \$1.50 \\ \times 40 \\ \hline \$60.00 \end{array}$$

6. 82,710;
$$\begin{array}{r} 919 \\ \times 90 \\ \hline 82,710 \end{array}$$

7. a. A and C

b. D

8. 1 and 2;

The factors of 18 are 1, 2, 3, 6, 9, and 18.

The factors of 28 are 1, 2, 4, 7, 14, and 28.

The common factors of 18 and 28 are 1 and 2.

9. 108;
$$\begin{array}{r} 108 \\ 4 \overline{)432} \\ \underline{-4} \\ 03 \\ \underline{-0} \\ 32 \\ \underline{-32} \\ 0 \end{array}$$

10. 70 R 3

$$\begin{array}{r} 6 \overline{)423} \\ \underline{-42} \\ 03 \\ \underline{-0} \\ 3 \end{array}$$

11. 30 R 3

$$\begin{array}{r} 8 \overline{)243} \\ \underline{-24} \\ 03 \\ \underline{-0} \\ 3 \end{array}$$

12. 500 R 1

$$\begin{array}{r} 4 \overline{)2001} \\ \underline{-20} \\ 00 \\ \underline{-0} \\ 01 \\ \underline{-0} \\ 1 \end{array}$$

$$\begin{array}{r}
 13. \quad 102 \\
 10 \overline{)1020} \\
 \underline{-10} \\
 02 \\
 \underline{-0} \\
 20 \\
 \underline{-20} \\
 0
 \end{array}$$

$$14. \quad 60; 420 \div (42 \div 6) \\ 420 \div 7 = 60$$

15. **500**; placing 468 on the number line, we see that it falls between 400 and 500. Since 468 is nearer to 500 than to 400 we *round up* to 500.

$$\begin{array}{r}
 16. \quad 4657 \\
 285 \\
 + 1223 \\
 \hline
 6165
 \end{array}$$

$$\begin{array}{r}
 17. \quad 8165 \\
 - 1635 \\
 \hline
 1530
 \end{array}$$

$$\begin{array}{r}
 18. \quad \$10.00 \\
 - \$8.93 \\
 \hline
 \$1.07
 \end{array}$$

$$\begin{array}{r}
 19. \quad 436 \\
 \times 70 \\
 \hline
 30,520
 \end{array}$$

$$\begin{array}{r}
 20. \quad \$8.57 \\
 \times 7 \\
 \hline
 \$59.99
 \end{array}$$

$$\begin{array}{r}
 21. \quad 600 \\
 \times 900 \\
 \hline
 540,000
 \end{array}$$

$$22. \quad \frac{2}{5}; 0.4; 40\%; \text{less than } 50\%$$

$$23. \quad 53 \text{ minutes}; 7:48 - 6:55 = 53 \text{ minutes}$$

24. **4 months**; (November, December, January, February)


25. **2200, 2300, 2400**; this sequence counts up. We find that the rule for this sequence is "count up by hundreds." Counting up by hundreds from 2100 gives us the next three terms: 2200, 2300, 2400.

$$\begin{array}{r}
 26. \quad 72 \\
 \times 6 \\
 \hline
 432
 \end{array}$$

432; The answer is correct.

$$27. \quad 7 \text{ dogs}; 14 \div 2 = 7 \text{ dogs}$$

28. **Sixty-eight thousand, two hundred**

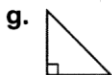
29. a. 

b. 

30. **Sample: about 60 sleeves**; 175 is about 180, and $180 \div 3 = 60$

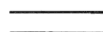
Lesson Practice 36

- a. **Acute triangle**; all three angles are acute
- b. **Obtuse triangle**; one of the angles is obtuse
- c. **Right triangle**; one of the angles is a right angle
- d. **Isosceles triangle**; at least two sides have equal lengths
- e. **Scalene triangle**; all three sides have different lengths
- f. **Equilateral triangle**; the three sides have equal lengths



- i. **Isosceles right triangle**
- j. **Scalene right triangle**

Written Practice 36

1. 

$$\begin{array}{r}
 2. \quad 418 \\
 - 386 \\
 \hline
 32 \text{ feet longer}
 \end{array}$$

3. $7s = 336$

$$\begin{array}{r} 48 \text{ students} \\ 7 \overline{)336} \\ \underline{-28} \\ 56 \\ \underline{-56} \\ 0 \end{array}$$

4. 14 days; $2 \times 7 = t$; $t = 14$ days

5. **800**; placing 780 on the number line, we see that it falls between 700 and 800. Since 780 is nearer to 800 than to 700 we *round up* to 800.

6. **B**

7. **200 years**; $1976 - 1776 = 200$ years

$$\begin{array}{r} 3 \\ 142 \\ -119 \\ \hline 23 \text{ votes} \end{array}$$

9. **Numerator**

10. a. **A**

b. **Sample: the figure is not closed.**

11. $\frac{2}{10}$ (or $\frac{1}{5}$) of a circle; two fourths is equal to $\frac{1}{2}$ which is equal to $\frac{5}{10}$; this means Cindy has $\frac{5}{10} + \frac{3}{10} = \frac{8}{10}$ (or $\frac{4}{5}$) of a circle.

$$\begin{array}{r} 52 \\ 763 \\ \times 800 \\ \hline 610,400 \end{array}$$

$$\begin{array}{r} 24 \\ \$24.08 \\ \times 6 \\ \hline \$144.48 \end{array}$$

$$\begin{array}{r} 32 \\ 976 \\ \times 40 \\ \hline 39,040 \end{array}$$

$$\begin{array}{r} 400 \\ \times 50 \\ \hline 20,000 \end{array}$$

$$\begin{array}{r} 71 \\ 5818 \\ -4747 \\ \hline 1071 \end{array}$$

$$\begin{array}{r} 222 \\ \$98.98 \\ \$36.25 \\ \$4.97 \\ + \$87.64 \\ \hline \$227.84 \end{array}$$

$$\begin{array}{r} 90 \\ 1010 \\ -918 \\ \hline 92 \end{array}$$

$$\begin{array}{r} \$1.09 \\ 7 \overline{) \$7.63} \\ \underline{-7} \\ 06 \\ \underline{-0} \\ 63 \\ \underline{-63} \\ 0 \end{array}$$

$$\begin{array}{r} 40 \text{ R } 8 \\ 9 \overline{)368} \\ \underline{-36} \\ 08 \\ \underline{-0} \\ 8 \end{array}$$

$$\begin{array}{r} 708 \\ 6 \overline{)4248} \\ \underline{-42} \\ 04 \\ \underline{-0} \\ 48 \\ \underline{-48} \\ 0 \end{array}$$

$$\begin{array}{r} \$1.25 \\ 8 \overline{) \$10.00} \\ \underline{-8} \\ 20 \\ \underline{-16} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

23. **3000, 3100, 3200**; this sequence counts up. We find that the rule for this sequence is "count up by hundreds." Counting up by hundreds from 2900 gives us the next three terms: 3000, 3100, 3200.

24. $\frac{1}{6}$; less than 25%; more than 10%

25. **860**

$$\begin{array}{r} 26. \quad 13 \\ \times 6 \\ \hline 78 \\ + 4 \\ \hline \end{array}$$

82; The answer is not correct.

27. $6 \times 6 = 36$

28. $70\%, \frac{7}{10} = \frac{70}{100} = 70\%$

29. See student work; check for a right angle and two sides of equal length.

30. About 40 miles per hour faster; round 61 to 60 and 23 to 20; then subtract $60 - 20$; about 40 miles per hour faster.

Early Finishers

a. Acute and isosceles

b. Right and scalene

c. Acute and isosceles or obtuse and isosceles

d. Right and scalene

Lesson Practice 37

a. Sample: 

b. Sample: 

c. Sample: 

d. Sample: 

Written Practice 37

1. Sample: _____

2. Sample: ; 50%

3. 65 items; $39 + 20 + 1 + 4 + 1 = t$

4. 36 inches; $3 \times 12 = t$

$$\begin{array}{r} 5. \quad 1620 \\ - 1517 \\ \hline 103 \text{ years} \end{array}$$

6. The factors of 40 are 1, 2, 4, 5, 8, 10, 20, and 40.

7. $\frac{5}{8}, \frac{5}{8} = 62.5\%$ which is **more than 50%**;
The area not shaded is $\frac{3}{8} = 37\frac{1}{2}\%$

8. 7:25 a.m.; $6:37 + 0:48 = 7:25$

9. 50; placing 46 on the number line, we see that it falls between 40 and 50. Since 46 is nearer to 50 than to 40 we *round up* to 50.

10. Sample: 

$$\begin{array}{r} 11. \quad \$36.51 \\ \$74.15 \\ + \$25.94 \\ \hline \$136.60 \end{array}$$

$$\begin{array}{r} 12. \quad w = 3040 - 2950; \quad \begin{array}{r} 3040 \\ - 2950 \\ \hline 90 \end{array} \end{array}$$

$$\begin{array}{r} 13. \quad \$90.00 \\ - \$20.30 \\ \hline \$69.70 \end{array}$$

$$\begin{array}{r} 14. \quad 592 \\ \times 90 \\ \hline 53,280 \end{array}$$

$$\begin{array}{r} 15. \quad \$4.75 \\ \times 80 \\ \hline \$380.00 \end{array}$$

$$\begin{array}{r} 16. \quad \begin{array}{l} 43 \\ c \\ 29 \\ 467 \\ + 94 \end{array} \rightarrow 633 \\ \hline 700 \end{array}$$

Find the unknown addend by subtracting the sum of the known addends from the total sum.

$$\begin{array}{r} 69, \\ 700 \\ - 633 \\ \hline 67 \end{array}$$

17. $< ; \frac{840}{8} = 105, \frac{460}{4} = 115,$
therefore $105 < 115$

Solutions

$$\begin{array}{r} 18. \quad 720 \\ \times \quad 400 \\ \hline 288,000 \end{array}$$

$$\begin{array}{r} 19. \quad w = \frac{\$12.24}{6}; \quad \begin{array}{r} \$2.04 \\ 6 \overline{) \$12.24} \\ \underline{-12} \\ 02 \\ \underline{-0} \\ 24 \\ \underline{-24} \\ 0 \end{array} \end{array}$$

$$\begin{array}{r} 20. \quad 1000 \div (100 \div 10) \\ 1000 \div 10 = 100 \end{array}$$

$$\begin{array}{r} 21. \quad 600 \times (235 \div 5) \\ 600 \times 47 = 2820 \end{array}$$

$$\begin{array}{r} 22. \quad 42 \times 30 \times 7 \\ 42 \times 210 \end{array}$$

$$\begin{array}{r} 210 \\ \times 42 \\ \hline 420 \\ + 8400 \\ \hline 8820 \end{array}$$

$$\begin{array}{r} 23. \quad \$20 - (\$3.48 + \$12 + \$4.39) \\ \$20 - \$19.87 \\ \begin{array}{r} 19.87 \\ \$20.00 \\ \underline{-\$19.87} \\ \$0.13 \end{array} \end{array}$$

$$\begin{array}{l} 24. \quad \left. \begin{array}{l} \frac{1}{2} \text{ of a circle} = 50\% \\ \frac{1}{4} \text{ of a circle} = 25\% \\ \frac{1}{10} \text{ of a circle} = 10\% \end{array} \right\} 50\% + 25\% + 10\% = 85\% \\ \text{Percent of circle missing} = 100\% - 85\% = 15\% \end{array}$$

25. B and D



$$27. \quad 1922; 1932 - 10 = 1922$$

28. a. 8 angles

b. 4 angles

$$c. \quad \frac{4}{8}$$

29. D

30. About 300 points; $150 + 150$, or 300 points

Early Finishers

a. See student work.

b. 24 songs

Lesson Practice 38

a. $\frac{3}{4}$; point a is between 0 and 1, so it is named by a fraction and not by a mixed number. The distance between whole numbers on this number line is divided into fourths. Point a is three sections from zero, which is $\frac{3}{4}$.

b. $1\frac{1}{4}$; the distance from zero to point b is 1 plus the length of one section, or $1\frac{1}{4}$.

c. $6\frac{2}{5}$; the distance between whole numbers on this number line is divided into fifths. Point c is two sections from 6, which is $6\frac{2}{5}$.

d. $7\frac{3}{5}$; the distance between whole numbers on this number line is divided into fifths. Point d is three sections from 7, which is $7\frac{3}{5}$.

$$e. \quad \frac{1}{3} < \frac{1}{2}$$

$$f. \quad \frac{1}{2} < \frac{3}{4}$$

$$g. \quad \frac{3}{4} > \frac{1}{3}$$

Written Practice 38

1. 

2. 7 points; $28 \div 4 = 7$ points

3. \$60; $4 \times \$15 = c$; \$60

4. \$295; $\$1020 - \$725 = m$; $m = \$295$

5. 449 cherries; $3c = 1347$; $1347 \div 3 = 449$

6. 39 years; $1989 - 1950 = 39$

7. A

8. ; 0.75

9. 366 days

10. 8 sides

$$\begin{array}{r} 11. \quad \begin{array}{r} 111 \\ 3647 \\ 92 \\ + 429 \\ \hline 4168 \end{array} \end{array}$$

$$\begin{array}{r} 12. \quad \begin{array}{r} 214 \\ 3518 \\ - 1853 \\ \hline 1665 \end{array} \end{array}$$

13. 0; any number multiplied by zero equals zero

$$\begin{array}{r} 14. \quad \begin{array}{r} 351 \text{ R } 8 \\ 10 \overline{)3518} \\ \underline{-30} \\ 51 \\ \underline{-50} \\ 18 \\ \underline{-10} \\ 8 \end{array} \end{array}$$

$$\begin{array}{r} 15. \quad \begin{array}{r} \$ 4.76 \\ \$ 12.00 \\ \$ 0.97 \\ + w \\ \hline \$ 20.00 \end{array} \quad \$ 17.73 \end{array}$$

$$\begin{array}{r} 199 \\ \$ 20.00 \\ - \$ 17.73 \\ \hline \$ 2.27 \end{array}$$

$$\begin{array}{r} 16. \quad \begin{array}{r} 999 \\ \$ 100.00 \\ - \$ 87.23 \\ \hline \$ 12.77 \end{array} \end{array}$$

$$\begin{array}{r} 17. \quad \begin{array}{r} 75 \\ 786 \\ \times 900 \\ \hline 707,400 \end{array} \end{array}$$

$$\begin{array}{r} 18. \quad \begin{array}{r} \$ 7.02 \\ 9 \overline{) \$ 63.18} \\ \underline{-63} \\ 01 \\ \underline{-0} \\ 18 \\ \underline{-18} \\ 0 \end{array} \end{array}$$

$$\begin{array}{r} 19. \quad \begin{array}{r} 375 \times (640 \div 8) \\ 375 \times 80 \end{array} \quad \begin{array}{r} 64 \\ 375 \\ \times 80 \\ \hline 30,000 \end{array} \end{array}$$

$$\begin{array}{r} 20. \quad =; (3 \times 5) \times 7 \bigcirc 3 \times (5 \times 7) \\ 15 \times 7 \bigcirc 3 \times 35 \\ 105 = 105 \end{array}$$

21. C

22. 2100, 2200, 2300; this sequence counts up. We find that the rule for this sequence is "count up by hundreds." Counting up by hundreds from 2000 gives us the next three terms: 2100, 2200, 2300.

23. $6\frac{2}{3}$; the distance between whole numbers on this number line is divided into thirds. The arrow is two sections from 6, which is $6\frac{2}{3}$.

24. $\frac{3}{4}$; the arrow is pointing between 0 and 1, so it is named by a fraction and not by a mixed number. The distance between whole numbers on this number line is divided into fourths. The arrow is three sections from zero, which is $\frac{3}{4}$.

25. 1:45 p.m.; $9:45 + 4:00 = 13:45$, which is 1:45

26. 600; placing 649 on the number line, we see that it falls between 600 and 700. Since 649 is nearer to 600 than to 700 we round down to 600.

$$\begin{array}{l} 27. \quad 18; n \div 6 = 3 \\ \quad \quad n = 3 \times 6 = 18 \end{array}$$

28. a. No

b. Yes

$$29. \quad \frac{1}{2} > \frac{1}{6}; \frac{1}{2} \text{ is } \frac{3}{6}, \frac{3}{6} > \frac{1}{6}$$

30. a. One Post Office Square and Calpine Center; $40 + 34 = 74$

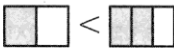
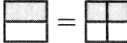
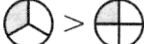
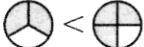
b. 29 stories; $58 - 29 = 29$ stories

c. Sample: Two Liberty Place is about 30 stories taller than 101 Montgomery Street because 58 rounds to 60 and 29 rounds to 30; $60 - 30 = 30$.

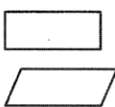
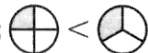
Early Finishers

See student work; sample: Draw a number line that begins with 0 and stops at 2. Label the midpoint as 1, then divide the space between each whole number into 3 equal parts, and mark the first tick mark to the right of 1.

Lesson Practice 39

- a. $<$; 
- b. $=$; 
- c. $>$; 
- d. $<$; 

Written Practice 39

1. 
2. 500 years; $5 \times 100 = t$; $t = 500$ years
3. 7 years; $13 - s = 6$; $s = 13 - 6$; 7 years
4. 244 feet; $2f = 488$; $f = 488 \div 2 = 244$ feet
5. $\frac{1}{4} < \frac{1}{3}$; 
6. $11\frac{1}{2}$; $11 \text{ R } 1$

$$\begin{array}{r} 2 \overline{)23} \\ \underline{-2} \\ 03 \\ \underline{-2} \\ 1 \end{array}$$
7. 3 fish fillets; $12 \div 4 = 3$ fish fillets
8. 80; placing 84 on the number line, we see that it falls between 80 and 90. Since 84 is nearer to 80 than to 90 we *round down* to 80.
9. The factors of 35 are **1, 5, 7, and 35.**
10. \$204.00;
$$\begin{array}{r} ^{122} \\ \$93.18 \\ \$42.87 \\ + \$67.95 \\ \hline \$204.00 \end{array}$$
11. \$21.25;
$$\begin{array}{r} ^{299} \\ \$30.00 \\ - \$8.75 \\ \hline \$21.25 \end{array}$$

12. 315;
$$\begin{array}{r} ^3 \\ 46 \\ 23 \\ 97 \\ 15 \\ 24 \\ 55 \\ + 55 \\ \hline 315 \end{array}$$
13. 852;
$$\begin{array}{r} ^{321} \\ 4304 \\ - 3452 \\ \hline 852 \end{array}$$
14. \$382.80;
$$\begin{array}{r} ^{24} \\ \$6.38 \\ \times 60 \\ \hline \$382.80 \end{array}$$
15. 448,000;
$$\begin{array}{r} ^2 \\ 640 \\ \times 700 \\ \hline 448,000 \end{array}$$
16. 80;
$$\begin{array}{r} 80 \\ 8 \overline{)640} \\ \underline{-64} \\ 00 \\ \underline{-0} \\ 0 \end{array}$$
17. \$72;
$$\begin{array}{r} 72 \\ 10 \overline{)720} \\ \underline{-70} \\ 20 \\ \underline{-20} \\ 0 \end{array}$$
18. \$1.04;
$$\begin{array}{r} \$1.04 \\ 6 \overline{) \$6.24} \\ \underline{-6} \\ 02 \\ \underline{-0} \\ 24 \\ \underline{-24} \\ 0 \end{array}$$
19. 309;
$$\begin{array}{r} 309 \\ 4 \overline{)1236} \\ \underline{-12} \\ 03 \\ \underline{-0} \\ 36 \\ \underline{-36} \\ 0 \end{array}$$

20. 80 R 3;

$$\begin{array}{r} 80 \text{ R } 3 \\ 7 \overline{)563} \\ \underline{-56} \\ 03 \\ \underline{-0} \\ 0 \end{array}$$

21. 524 R 2;

$$\begin{array}{r} 524 \text{ R } 2 \\ 9 \overline{)4718} \\ \underline{-45} \\ 21 \\ \underline{-18} \\ 38 \\ \underline{-36} \\ 2 \end{array}$$

22. 375;

$$\begin{array}{r} 375 \\ 8 \overline{)3000} \\ \underline{-24} \\ 60 \\ \underline{-56} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

23. 11:40 p.m.; $12:00 - 0:20 = 11:40$

24. $37\frac{1}{2}\%$; $\frac{1}{8}$ of a circle = 12.5%
 $+ \frac{1}{4}$ of a circle = 25%

37.5% or $37\frac{1}{2}\%$

25. April 20, 1901

26. a. $8\frac{1}{5}$; the distance between whole numbers on this number line is divided into fifths. The arrow is one section from 8, which is $8\frac{1}{5}$.

b. $8\frac{4}{5}$; the distance between whole numbers on this number line is divided into fifths. The arrow is four sections from 8, which is $8\frac{4}{5}$.

c. $8\frac{1}{5} < 8\frac{4}{5}$ or $8\frac{4}{5} > 8\frac{1}{5}$

27. 24,960;

$$\begin{array}{r} 416 \\ \times 60 \\ \hline 24,960 \end{array}$$

28. a. 24 hours

b. 12 hours; $24 \div 2 = 12$ hr

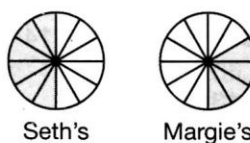
c. $\frac{12}{24}$

29. 7 hours 45 minutes or $7\frac{3}{4}$ hours; 7:45 a.m. to 4:15 p.m. = 8 hours 30 minutes;
 $8 \text{ hr } 30 \text{ min} - 45 \text{ min} = 7 \text{ hr } 45 \text{ min}$

30. Sample: about 20 miles each day; 135 is about 140, and $140 \div 7 = 20$.

Early Finishers

a.



b. $\frac{1}{2} > \frac{1}{3}$

c. Seth ate 6 slices; Margie ate 4 slices.

Lesson Practice 40

a. $1\frac{1}{3}$; we see two circles. The completely shaded circle represents the whole number 1. One-third of the second circle is shaded. It represents the fraction $\frac{1}{3}$. Together, the number of shaded circles is one and one-third.

b. $2\frac{1}{4}$; we see three circles. The completely shaded circles represent the whole number 2. One-fourth of the third circle is shaded. It represents the fraction $\frac{1}{4}$. Together, the number of shaded circles is two and one-fourth.



e. $2\frac{1}{4}$ pies; See student work.

Taro: = $2\frac{1}{4}$ pies

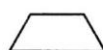
Shasa: = $2\frac{1}{4}$ pies

Layne: = $2\frac{1}{4}$ pies

Cynthia: = $2\frac{1}{4}$ pies

Written Practice 40

1.



2. $\frac{1}{6}$

3. $1\frac{1}{3}$ oranges; $4 \div 3 = 1\frac{1}{3}$

Solutions

4. $2\frac{2}{3}$; We see three circles. The completely shaded circles represent the whole number 2. Two-third of the third circle is shaded. It represents the fraction $\frac{2}{3}$. Together, the number of shaded circles is two and two-thirds.

5. 28 students; $5c = 140$; $140 \div 5 = 28$

6. 14 fewer pounds; $83 - 69 = d$; $d = 14$

7. 37 more stars; $50 - 13 = d$; $d = 37$

8. 1 more side; a hexagon has 6 sides, a pentagon has 5 sides; $6 - 5 = 1$

9. 75%; $\frac{1}{2}$ of a circle = 50%

$$\begin{array}{r} + \frac{1}{4} \text{ of a circle} = 25\% \\ \hline 75\% \end{array}$$

10. a. $2\frac{3}{4}$; the distance between whole numbers on this number line is divided into fourths. The arrow is three sections from 2, which is $2\frac{3}{4}$.

- b. $3\frac{1}{4}$; the distance between whole numbers on this number line is divided into fourths. The arrow is one section from 3, which is $3\frac{1}{4}$.

c. $2\frac{3}{4} < 3\frac{1}{4}$ or $3\frac{1}{4} > 2\frac{3}{4}$

11. $12\frac{1}{2}\%$; $25 \div 2 = 12\frac{1}{2}\%$

12. 879; $534 + 345 = 879$

13. 2882;

$$\begin{array}{r} 22 \\ 785 \\ 964 \\ 287 \\ + 846 \\ \hline 2882 \end{array}$$

14. 3352;

$$\begin{array}{r} 610 \\ 7106 \\ - 3754 \\ \hline 3352 \end{array}$$

15. \$230.40;

$$\begin{array}{r} 52 \\ \$3.84 \\ \times \quad 60 \\ \hline \$230.40 \end{array}$$

16. 615,200;

$$\begin{array}{r} 57 \\ 769 \\ \times \quad 800 \\ \hline 615,200 \end{array}$$

17. \$3.06;

$$\begin{array}{r} \$3.06 \\ 8 \overline{) \$24.48} \\ -24 \\ \hline 04 \\ -0 \\ \hline 48 \\ -48 \\ \hline 0 \end{array}$$

18. 480;

$$\begin{array}{r} 480 \\ 9 \overline{) 4320} \\ -36 \\ \hline 72 \\ -72 \\ \hline 00 \\ -0 \\ \hline 0 \end{array}$$

19. \$4.32; $\$20 - (\$1.45 + \$6.23 + \$8)$

$$\begin{array}{r} \$20 - \\ \hline \$15.68 \end{array}$$

$$\begin{array}{r} 199 \\ \$20.00 \\ - \$15.68 \\ \hline \$4.32 \end{array}$$

20. 18,710;

$$\begin{array}{r} 321 \\ 3742 \\ 3742 \\ 3742 \\ 3742 \\ + 3742 \\ \hline 18,710 \end{array} \quad \text{or} \quad \begin{array}{r} 321 \\ 3742 \\ \times \quad 5 \\ \hline 18,710 \end{array}$$



21. 700; placing 650 on the number line, we see that it falls between 600 and 700. Since 650 is nearer to 700 than to 600 we round up to 700.

22. $\frac{1}{10}$; 10%

23. C

24. 90, 100, 110; this sequence counts up. We find that the rule for this sequence is "count up by tens." Counting up by tens from 80 gives us the next three terms: 90, 100, 110.

25. 61°F ; $48^\circ\text{F} + 13^\circ\text{F} = 61^\circ\text{F}$

26. $\frac{1}{4} < \frac{1}{3}$;  

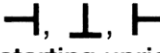
27. B; the denominator of $\frac{3}{5}$ is 5, half of 5 is $2\frac{1}{2}$. Since 3 is greater than $2\frac{1}{2}$, $\frac{3}{5}$ is greater than $\frac{1}{2}$.

28. 8:27 a.m.; the pattern counts up by 30 minutes. 7:52 a.m. plus 30 minutes is equal to 8:27 a.m.

29. **Sample:** use compatible numbers; since 26 miles and 385 yards is about 25 miles, Steve has run about 25×4 , or 100 miles.
30. **Sample:** use compatible numbers; since 55 minutes is about 54 minutes, each drill is about $54 \div 6$, or 9 minutes long.

Investigation 4

Focus on

1. **67, 73, 79; arithmetic;** the sequence counts up by 6s
2. **32, 64, 128; geometric;** the sequence increases by multiplying by 2
3. **42, 40, 38; arithmetic;** the sequence counts down by 2s
4. **162, 486, 1458; geometric;** the sequence increases by multiplying by 3
5. **\$63, \$71, \$79; arithmetic;** $\$55 + \$8 = \$63$; $\$63 + \$8 = \$71$; $\$71 + \$8 = \$79$
6. **100, 200, 400; geometric;** $50 \times 2 = 100$; $100 \times 2 = 200$; $200 \times 2 = 400$
7. 5, 9, 4
8. 3, 6, 5
9. B, U, L
10. U, L, B
11. 4, 4, 5, 5; a sequence of the counting numbers that increases by 1 and with each number recorded twice
12. 8, 0, 10, 0; the terms alternate between 0s and the positive even numbers. The positive even numbers increase by 2
13. J, K, M, N; the letters of the alphabet, skipping every third letter
14. ; the uppercase letter T, starting upright and rotating 90° clockwise for each term of the sequence
15. 1, 2, 3, 4, 5; these are the counting numbers 1, 2; followed by 1, 2, 3; followed by 1, 2, 3, 4; and so on.
16. **36, 49, 64;** we first find the difference between successive terms.

$$1, \overset{+3}{\curvearrowright} 4, \overset{+5}{\curvearrowright} 9, \overset{+7}{\curvearrowright} 16, \overset{+9}{\curvearrowright} 25$$

The increasing difference from one term to the next also forms a sequence. This sequence may be continued.

$$25, \overset{+11}{\curvearrowright} 36, \overset{+13}{\curvearrowright} 49, \overset{+15}{\curvearrowright} 64$$

We have found the next terms are **36, 49 and 64.**
17. **17, 23, 30;** we first find the difference between successive terms.

$$2, \overset{+1}{\curvearrowright} 3, \overset{+2}{\curvearrowright} 5, \overset{+3}{\curvearrowright} 8, \overset{+4}{\curvearrowright} 12$$

The increasing difference from one term to the next also forms a sequence. This sequence may be continued.

$$12, \overset{+5}{\curvearrowright} 17, \overset{+6}{\curvearrowright} 23, \overset{+7}{\curvearrowright} 30$$

We have found the next terms are **17, 23 and 30.**
18. **13, 21, 34;** we find each term by adding the two preceding terms. Five and 8 were added to get the third term, 13. Then we added 8 and 13 to find the fourth term, 21. Last, we added 13 and 21 to find the fifth term, 34.
19. C
20. 11; $15 - 4 = 11$
21. **Multiply the hours worked by 8 dollars.**
22. **\$200;** $25 \times \$8 = \200
23. **1095 miles in a year;** find the number of miles jogged in 1 year by multiplying the number of days in a year by 3. $365 \times 3 = 1095$

Number of Days	Miles Jogged
2	6
3	9
5	15
8	24