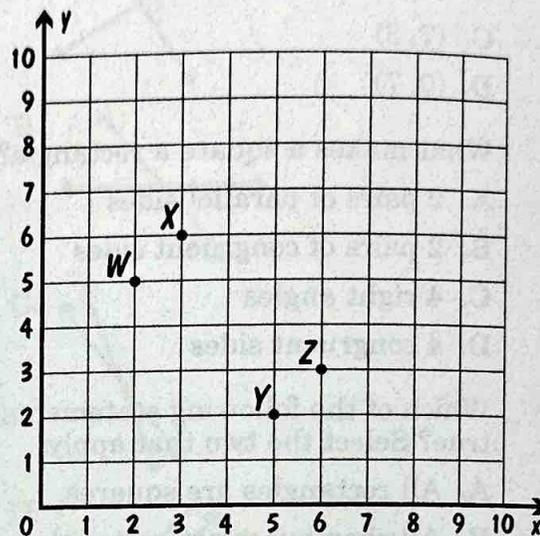


## Part 1

Read each question. Select the correct answer.

- 1 What is the value of 4 in 814,592?  
 A. 400  
 B. 4,000  
 C. 40,000  
 D. 400,000
- 2 What is 49,612 rounded to the nearest thousand?  
 A. 49,000  
 B. 49,600  
 C. 49,610  
 D. 50,000
- 3 What is the difference between 64,926 and 49,079?  
 A. 25,847  
 B. 15,957  
 C. 15,857  
 D. 15,847
- 4 Which number correctly completes the comparison?  
 42 is 7 times as many as \_\_\_\_\_.  
 A. 59                                      B. 35  
 C. 6    D. 5
- 5 An apple orchard harvested 4,551 apples and separated them evenly in 123 baskets. How many apples are in each basket? Enter your response in the gridded area on the answer sheet.  
 \_\_\_\_\_ apples

- 6 Look at the points on the coordinate grid.



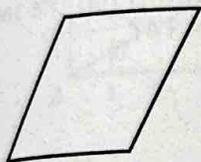
Which of these are true statements based on the points on the coordinate grid? Select the two that apply.

- A. To graph point X, move right 6 units and up 3 units.  
 B. The y-coordinate for Point W is 5.  
 C. The x-coordinate for Point Z is 3.  
 D. The ordered pair for Point Y is (5, 2)  
 E. Point W and Point Z have the same x-coordinate.
- 7 Caitlin has  $9\frac{3}{8}$  feet of red yarn and  $5\frac{5}{8}$  feet of purple yarn. How much more red yarn does Caitlin have than purple yarn?  
 A.  $3\frac{2}{8}$  ft  
 B.  $3\frac{6}{8}$  ft  
 C.  $4\frac{2}{8}$  ft  
 D.  $4\frac{6}{8}$  ft

8 Ian has a piece of wood that is  $\frac{11}{12}$  feet long. He cuts off  $\frac{7}{12}$  feet of the piece to use in a project. How much of the piece of wood does Ian have left?

- A.  $\frac{18}{12}$  ft
- B.  $\frac{18}{24}$  ft
- C.  $\frac{5}{12}$  ft
- D.  $\frac{4}{12}$  ft

9 Which of the following categories does this shape belong to? Select the three that apply.



- A. polygon
- B. quadrilateral
- C. square
- D. parallelogram
- E. trapezoid
- F. rectangle

10 Mr. Rosario uses  $\frac{3}{8}$  of a tank of gasoline each week to drive to and from his job. How many tanks of gasoline does Mr. Rosario use in 9 weeks?

- A.  $3\frac{3}{8}$
- B.  $3\frac{4}{8}$
- C.  $4\frac{3}{8}$
- D.  $4\frac{5}{8}$

11 Thu is ordering supplies for her office. She orders 4 packages of pens and 5 packages of highlighters. Pens come in packages of 10, and highlighters come in packages of 4. How many more pens did she buy?

- A. 1
- B. 9
- C. 20
- D. 34

12 Maria is making a stained-glass window using glass tiles. Each tile is  $\frac{1}{4}$  inch by  $\frac{1}{4}$  inch. The window is 14 inches wide by 20 inches long. How many glass tiles will Maria need to make her stained-glass window?

- A. 4,480
- B. 2,240
- C. 1,120
- D. 280

13 Tamara has  $\frac{2}{3}$  gallon of lemonade. She pours the same amount into each of 4 glasses. Which expression represents the fraction of a gallon of lemonade that is in each glass?

- A.  $\frac{2}{3} \times 4$
- B.  $4 \div \frac{2}{3}$
- C.  $\frac{2}{3} \div 4$
- D.  $4 \times \frac{2}{3}$

14 An 8-mile hiking trail has a distance marker every  $\frac{1}{4}$ -mile. How many markers are on the trail?

- A. 32
- B. 16
- C. 12
- D. 2

15 Melissa scored 8 points in her last basketball game. The rest of the team scored 5 times as many points as Melissa. Which equation can be used to find the number of points  $p$  that the rest of the team scored?

- A.  $8 \times 5 = p$
- B.  $8 + 5 = p$
- C.  $5 + p = 8$
- D.  $5 \times p = 8$

16 Abby has 4 packages of granola bars and will give each of her friends  $\frac{1}{2}$  of a package of granola bars. How many friends will Abby give granola bars to?

- A. 2
- B. 4
- C. 8
- D. 16

17 Henry has a bag of potting soil that is  $\frac{3}{4}$  full. He uses  $\frac{1}{16}$  of a bag to fill small flower pots. How many small flower pots can he fill?

- A. 48  
 B. 12  
 C.  $\frac{11}{16}$   
 D.  $\frac{3}{64}$

18 A number  $n$  is 7 more than a number  $p$ . Which expression represents the value of  $n$ ?

- A.  $n + 7$   
 B.  $p + 7$   
 C.  $n - 7$   
 D.  $p - 7$

19 What is the value of the expression  $2 \times 5 + 3y$  for  $y = 2$ ?

- A. 16  
 B. 22  
 C. 26  
 D. 32

20 How do you write 8.65 in word form?

- A. eight and sixty-five  
 B. eight and sixty-five tenths  
 C. eight and sixty-five hundredths  
 D. eight and sixty-five thousandths

21 Which statement below is true?

- A.  $4.3 \leq 4.03 < 4.33$   
 B.  $4.03 < 4.33 < 4.3$   
 C.  $4.03 < 4.3 < 4.33$   
 D.  $4.33 < 4.3 < 4.03$

22 What is the coefficient in the expression  $17r + 3$ ?

- A.  $r$   
 B.  $17r$   
 C. 17  
 D. 5

23 Which expression is NOT equivalent to the expression  $14 - (2x + 3)$ ?

- A.  $14 - 2x + 3$   
 B.  $14 - 2x - 3$   
 C.  $(14 - 2x) - 3$   
 D.  $11 - 2x$

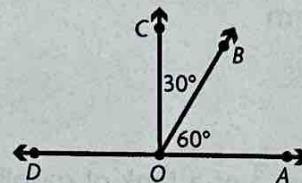
24 Kendall hiked along a trail that was 10.25 miles long. He hiked 2.5 miles every hour. How many hours did it take Kendall to finish hiking the trail? Enter your response in the gridded area on the answer sheet.

\_\_\_\_\_ hours

25 Which of these equations has the same solution as  $2x + 2 = 14$ ?

- A.  $x + 2 = 14$   
 B.  $x + 8 = 14$   
 C.  $2x - 2 = 12$   
 D.  $x - 4 = 6$

26 What is the measure of  $\angle COD$ ?

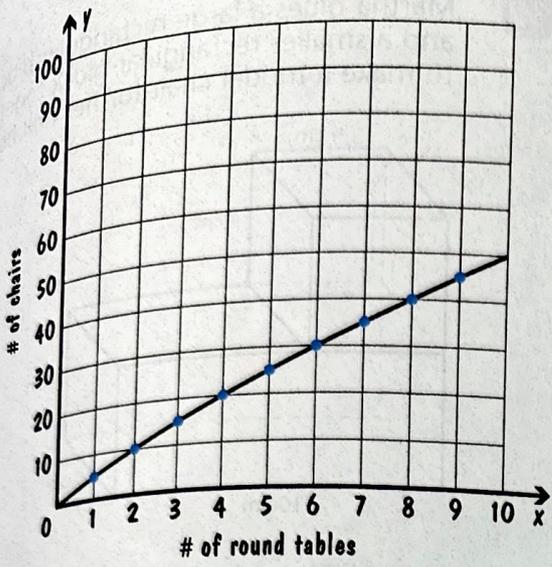


- A.  $30^\circ$   
 B.  $60^\circ$   
 C.  $90^\circ$   
 D.  $120^\circ$

27 Which of the following questions is a statistical question?

- A. What is the favorite sport of my colleagues?  
 B. What is my best friend's favorite sport?  
 C. How many colleagues play a sport?  
 D. How many people attended last night's football game?

28 The graph shows the relationship between the number of chairs,  $c$ , and the number of tables,  $t$ .



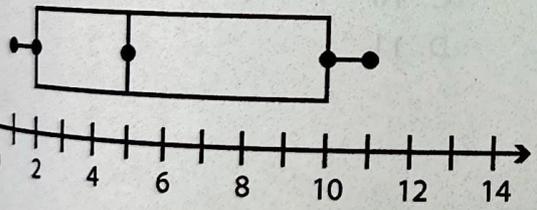
Which equation best describes the relationship between the two variables?

- A.  $t = 5c$
- B.  $c = 5t$
- C.  $c = t$
- D.  $c = \frac{1}{4}t$

29 Skyley worked out for 90 minutes at the fitness center. This was 6 times as long as Dustin worked out. How long did Dustin work out?

- A. 15 minutes
- B. 30 minutes
- C. 60 minutes
- D. 540 minutes

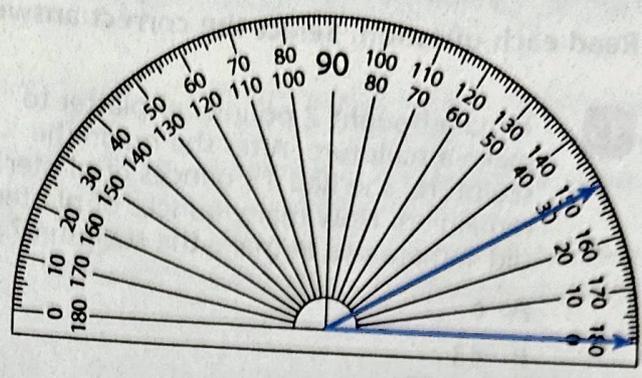
30 Use the box plot.



What is the median?

- A. 1
- B. 2
- C. 5
- D. 10

31 What is the measure of the angle?

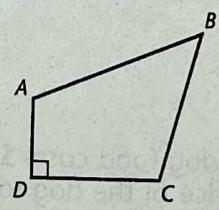


- A.  $30^\circ$
- B.  $90^\circ$
- C.  $120^\circ$
- D.  $150^\circ$

32 Which of the following expressions have the same value? Select the three that apply.

- A.  $7 + 5 \times 3 - (4 \div 2)$
- B.  $7 + 5 \times (3 - 4) \div 2$
- C.  $7 + (5 \times 3) - 4 \div 2$
- D.  $(7 + 5) \times 3 - 4 \div 2$
- E.  $7 + 5 \times 3 - 4 \div 2$

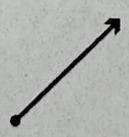
33 A quadrilateral is shown.



Which angle is an acute angle?

- A.  $\angle DAC$
- B.  $\angle ABC$
- C.  $\angle BCD$
- D.  $\angle ADC$

34 Bernie drew the figure below.



Which term describes the figure?

- A. angle
- B. line
- C. line segment
- D. ray

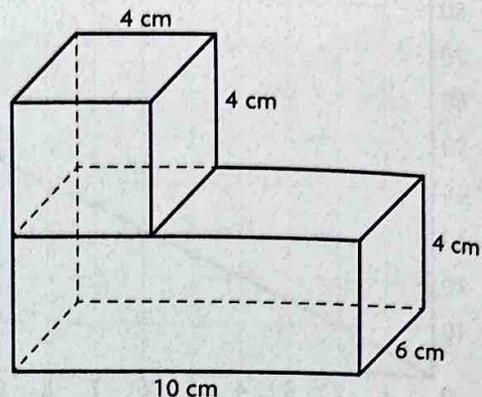
## Part 2

Read each question. Select the correct answer. You may use a calculator on Part 2.



- 35 Tamara bought 7 pounds of plaster to make a sculpture. After she made the sculpture, she had 13 ounces of plaster remaining. How many ounces of plaster did Tamara use to make the sculpture?
- A. 6  
B. 43  
C. 99  
D. 125
- 36 Scott bought 9.25 liters of gasoline to mow lawns. He used 4.2 liters of gasoline. How many milliliters of gasoline does Scott have left?
- A. 5.05  
B. 50.5  
C. 505  
D. 5050
- 37 A shipping container has a volume of 4,536 cubic feet. Which could be the dimensions of the container in feet?
- A.  $25 \times 16 \times 12$   
B.  $27 \times 14 \times 12$   
C.  $26 \times 15 \times 12$   
D.  $27 \times 13 \times 13$
- 38 A 7-pound bag of dog food costs \$8.26. What is the unit price of the dog food?
- A. \$0.79 per pound  
B. \$1.18 per pound  
C. \$1.26 per pound  
D. \$57.82 per pound

- 39 Martha glues a large rectangular block and a smaller rectangular block together to make a model chair for her doll house.



What is the volume of the model, in cubic centimeters?

- A. 64  
B. 240  
C. 336  
D. 480
- 40 A yoga instructor has a list of 137 students who have signed up for yoga classes. The instructor can register 14 students in each class. What is the least number of classes needed for all students to be registered in a class?
- A. 8  
B. 9  
C. 10  
D. 11

## Lesson 49

### Ordered Pairs

(5.G.1)

1. C. The ordered pair that represents the location of point  $F$  is  $(4, 6)$ .
2. D. Point  $H$  is located at  $x$ -coordinate 1,  $y$ -coordinate 3.
3. B. Point  $C$  is located at  $x$ -coordinate 3,  $y$ -coordinate 2. The ordered pair is  $(3, 2)$ .
4. C. On a coordinate plane, the  $y$ -axis is the vertical axis.
5. A. In an ordered pair, the first number represents the  $x$ -coordinate.
6. C. Point  $A$  is located at  $(2, 2)$  on the coordinate plane.
7. B. Point  $B$  is located at  $(4, 4)$  on the coordinate plane.
8. D. A diagonal line through points  $A$ ,  $B$ , and  $C$  would also go through  $(5, 5)$ .

## Lesson 50

### Polygons

(5.G.3)

1. C. A pair of perpendicular sides forms a right angle. The triangle is a right triangle.
2. B. Trapezoids have one pair of opposite parallel sides.
3. B. Only squares are rhombuses with four right angles.
4. A. All squares are rhombuses because they have four sides of equal length and two pairs of parallel sides.
5. A. The sum of the interior angles of a triangle is  $180^\circ$ . An equilateral triangle has three equal angles. Each angle is  $60^\circ$ . They are all acute angles.
6. D. Of the choices given, only squares and rectangles are always parallelograms. They both have two pairs of parallel sides.
7. B. All squares are rectangles. They have four right angles and two pairs of parallel sides.

## Lesson 51

### Three-Dimensional Figures and Nets

(6.G.4)

1. C. The surface area of two identical triangles is  $2 \times \frac{1}{2}bh$ .  $\frac{1}{2}bh = \frac{1}{2}(8 \text{ cm} \times 3 \text{ cm}) = 12 \text{ cm}^2$ ;  
 $2 \times \frac{1}{2}bh = 2 \times 12 \text{ cm}^2 = 24 \text{ cm}^2$ .
2. D. The area of the two triangles is  $24 \text{ cm}^2$ . The area of the two small rectangles is  $2(12 \times 5)$ , or  $120 \text{ cm}^2$ . The area of the large rectangle is  $12 \times 8$ , or  $96 \text{ cm}^2$ .  $24 + 120 + 96 = 240 \text{ cm}^2$ .

3. D. A triangular prism has rectangular faces and a triangle at each end.
4. A. A 9-inch cube has a surface area of  $6(9 \times 9)$ , or  $486$  square inches.  $500 - 486 = 14$
5. A. A square pyramid has a square base and four triangular faces.
6. C. Four triangular faces:  $\frac{1}{2}(3 \times 2) = 3$ ;  $4 \times 3 = 12$ .  
Base:  $2 \times 2 = 4$ . Total surface area:  $12 + 4 = 16$  square inches.
7. D. One box uses 16 square inches of cardstock.  $6 \times 16 = 96$  square inches.
8. B.  $2(8 \times 5) + 2(6 \times 5) + 2(8 \times 6) = 80 + 60 + 96 = 236 \text{ in.}^2$

## Unit 8

### Review: Geometry

1. B. An acute angle has a measure of less than  $90^\circ$ . 4.G.1
2. D. Parallel lines never intersect. 4.G.1
3. A. Perpendicular lines meet at a  $90^\circ$  angle. 4.G.1
4. A. In a coordinate pair, the  $x$ -value is listed first, then the  $y$ -value. 5.G.1
5. B. In a coordinate pair, the  $x$ -value is listed first, then the  $y$ -value. 5.G.1
6. C. The defining feature of a rectangle is 4 right angles. 5.G.3
7. D, E. A regular polygon is an equilateral polygon; a square has four equal sides. A quadrilateral has four sides; a parallelogram has four sides. 5.G.3
8. D. Find the surface area of each pair of surfaces and then add;  $16 \times 8 = 128$ ,  $128 \times 2 = 256$ ;  $16 \times 6 = 96$ ,  $96 \times 2 = 192$ ;  $6 \times 8 = 48$ ,  $48 \times 2 = 96$ ;  $256 + 192 + 96 = 544 \text{ cm}^2$ . 6.G.4
9. C. A triangular prism has two triangular bases and three rectangular faces. 6.G.4
10. C. Find the surface area of each pair of surfaces and then add;  $6 \times 2 = 12$ ,  $12 \times 2 = 24$ ;  $4 \times 2 = 8$ ,  $8 \times 2 = 16$ ;  $6 \times 4 = 24$ ,  $24 \times 2 = 48$ ;  $24 + 16 + 48 = 88 \text{ cm}^2$ . 6.G.4

## Level M

### Practice Test

#### Part 1

1. B. The 4 is in the thousands place, so it represents 4,000. 4.NBT.1
2. D. When rounding, evaluate the digit to the right of the place you are rounding to. The digit in the hundreds place is a 6, so you round up by adding 1 to the 9 in the thousands place, which causes the ten-thousands place to increase by 1. The number rounds up to 50,000. 4.NBT.3

3. D. Subtract using the standard algorithm, regrouping as necessary.  $64,926 - 49,079 = 15,847$ . 4.NBT.4

4. C. Divide 42 by 7;  $42 \div 7 = 6$ , so  $42 = 7 \times 6$ . 4.OA.1

5. 37. Divide the number of apples by the number of bags;  $4,551 \div 123 = 37$ . 6.NS.2

6. B, D. Point W is plotted at (2, 5), so the y-coordinate of Point B is 5. Point Y is plotted at (5, 2). 5.G.1

7. B. Convert each mixed number into an improper fraction;  $9\frac{3}{8} = \frac{75}{8}$ ,  $5\frac{5}{8} = \frac{45}{8}$ . Subtract;  $\frac{75}{8} - \frac{45}{8} = \frac{30}{8}$ . Convert the improper fraction into a mixed number;  $\frac{30}{8} = 3\frac{6}{8}$ . 4.NF.3.c

8. D. When subtracting, if two fractions have the same denominator, subtract their numerators.

$\frac{11}{12} - \frac{7}{12} = \frac{4}{12}$  4.NF.3.d

9. A, B, D. The shape is a parallelogram, which is one type of quadrilateral. It is also a polygon. 5.G.3

10. A. This is a multiplication situation;  $9 \times \frac{3}{8} = \frac{9}{1} \times \frac{3}{8} = \frac{27}{8} = 3\frac{3}{8}$ . 4.NF.4.c

11. C. First, determine how many of each item she orders. Pens:  $4 \times 10 = 40$ . Highlighters:  $5 \times 4 = 20$ . Then, find the difference.  $40 - 20 = 20$ . 4.OA.3

12. A. Each linear inch requires 4 tiles. Multiply each dimension by 4;  $14 \times 4 = 56$ ,  $20 \times 4 = 80$ . Multiply the results by each other  $56 \times 80 = 4,480$ . 5.NF.4

13. C. This is a division situation. Divide the total amount of lemonade by the number of glasses.  $\frac{2}{3} \div 4$ . 5.NF.7.a

14. A. This is a division situation;  $8 \div \frac{1}{4} = 8 \times \frac{4}{1} = 32$ . 5.NF.7.c

15. A. The word "times" indicates multiplication, so 5 times as many as 8 can be represented by  $8 \times 5 = p$ . 4.OA.1

16. C. This is a division situation;  $4 \div \frac{1}{2} = \frac{4}{1} \div \frac{1}{2} = \frac{4}{1} \times \frac{2}{1} = \frac{8}{1} = 8$ . 5.NF.7.c

17. B. This is a division situation;  $\frac{3}{4} \div \frac{1}{16} = \frac{3}{4} \times \frac{16}{1} = \frac{48}{4} = 12$ . 6.NS.1

18. B. To get 7 more than  $p$ , add 7 to  $p$ . 6.EE.2.a

19. A. Multiply first:  $2 \times 5 = 10$  and  $3y = 3 \times 2 = 6$ . Then add:  $10 + 6 = 16$ . 6.EE.2.c

20. C. The last digit of the decimal is in the hundredths place, so the decimal portion of the number is sixty-five hundredths. 5.NBT.3.a

21. C. Add a zero to the decimal numbers whose last digit is in the tenths place. Compare the digits in the decimal places from left to right;  $4.3 = 4.30$ ,  $4.03 < 4.30 < 4.33$ . 5.NBT.3.b

22. C. In an algebraic expression, the coefficient is the number multiplied by a variable in the same term. 6.EE.2.b

23. A. When distributing the negative sign to the terms within the parentheses, you must distribute it to both of the terms. Both the  $2x$  and the 3 are negative. 6.EE.4

24. 4.1. This is a division situation;  $10.25 \div 2.5 = 4.1$ . 5.NBT.7

25. B. Solve for  $x$  in the first equation by subtracting 2 from each side of the equation and then dividing both sides of the equation by 2;  $x = 6$ . Substitute the value of  $x$  into each equation to determine the equation that is true;  $6 + 8 = 14$ . 6.EE.7

26. C. Subtract the given angles from  $180^\circ$ ;  $180^\circ - 30^\circ - 60^\circ = 90^\circ$ . 4.MD.7

27. A. A statistical question is one that can be answered by collecting data and where there will be variability in that data. Asking colleagues a question will provide variability. 6.SP.1

28. B. Write an equation to express the dependent variable,  $c$ , in terms of the independent variable,  $t$ . The coefficient for the independent variable is equal to the rate of change, or 5 chairs per table.  $C = 5t$  6.EE.9

29. A. Divide the number of minutes Skyler worked out by the multiple of Dustin's workout;  $90 \div 6 = 15$ . 4.OA.2

30. C. The median in a box plot is the middle line. 6.SP.4

31. A.  $180^\circ - 150^\circ = 30^\circ$ . 4.MD.6

32. A, C, E. Evaluate each expression using the order of operations. A, C, & E all equal 20. 5.OA.1

33. B. An acute angle has less than  $90^\circ$ . Angle B is less than  $90^\circ$ . 4.G.1

34. D. A ray begins at a point and continues on indefinitely in one direction. 4.G.1

## Part 2

35. C. Multiply the number of pounds of plaster by 16 to find the number of ounces of plaster Tamara bought;  $7 \times 16 = 112$ . Subtract the plaster used from the plaster purchased;  $112 - 13 = 99$ . 5.MD.1

36. D. Subtract the amount used from the amount purchased;  $9.25 - 4.2 = 5.05$ . Multiply by 1,000 to convert from liters to milliliters.  $5.05 \times 1000 = 5050$ . 5.MD.1

37. B. Multiply each answer choice;  $27 \times 14 \times 12 = 4,536$ . 5.MD.5.b

38. B. To find the unit rate, divide the cost of the bag of dog food by the number of pounds;  $8.26 \div 7 = 1.18$ . 6.RP.2

39. C. Find the volume of each block and add them together;  $10 \times 6 \times 4 = 240$ ,  $4 \times 4 \times 6 = 96$ ,  $240 + 96 = 336$ . 5.MD.5.c

40. C. Divide the total number of students by the number of students in each class and round up to the nearest whole number;  $137 \div 14 \approx 9.78$ , rounded to 10. 5.NF.3

# Level M Practice Test: Analysis Chart

**Instructions:** Use the Answers and Explanations starting on page 146 to check your answers to the Practice Test. Then, place an X next to the item numbers you missed. Review the lessons identified for any missed items.

Practice Test Item	Correct/Incorrect	For incorrect items, review the following lesson
1		Lesson 1
2		Lesson 2
3		Lesson 3
4		Lesson 6
5		Lesson 7
6		Lesson 49
7		Lesson 12
8		Lesson 11
9		Lesson 50
10		Lesson 14
11		Lesson 37
12		Lesson 14
13		Lesson 16
14		Lesson 17
15		Lesson 6
16		Lesson 17
17		Lesson 18
18		Lesson 24
19		Lesson 25
20		Lesson 20

Practice Test Item	Correct/Incorrect	For incorrect items, review the following lesson
21		Lesson 20
22		Lesson 24
23		Lesson 26
24		Lesson 23
25		Lesson 28
26		Lesson 44
27		Lesson 45
28		Lesson 28
29		Lesson 31
30		Lesson 47
31		Lesson 44
32		Lesson 36
33		Lesson 48
34		Lesson 48
35		Lesson 38
36		Lesson 39
37		Lesson 41
38		Lesson 19
39		Lesson 42
40		Lesson 8