Section 1: You may NOT use a calculator to answer these items.

- Baileigh goes to the farmers market and buys 286 tomatoes. She is trying to use as few containers as possible. If she can fit 12 tomatoes in each container, how many containers will she need to take all of the tomatoes home?
 - A 24 containers
 - B 26 containers
 - C 23 containers
 - **D** 25 containers
- 2 Christian and his friend Jacob picked apples.
 - Christian picked $2\frac{1}{6}$ bushels of apples on Saturday and $\frac{1}{3}$ bushel on Sunday.
 - Jacob picked $4\frac{2}{3}$ bushels of apples on Saturday and $\frac{1}{4}$ bushel on Sunday.

How many more bushels did Jacob pick than Christian?

- **A** $4\frac{11}{12}$
- **B** $2\frac{5}{12}$
- **c** $7\frac{5}{12}$
- **D** $2\frac{1}{2}$

- **3 Which fraction is closest to 0.917?**
 - $A \qquad \frac{11}{12}$
 - $\mathbf{B} \qquad \frac{9}{17}$
 - c $\frac{4}{5}$
 - $\frac{3}{6}$
- Troy earned \$689 over the summer working for the fishermen at Pirate's Cove Marina. He spent \$249.69 on a new baseball bat and \$89.99 on a new pair of cleats. How much money does he have left?
 - **A** \$339.68
 - **B** \$350.68
 - **C** \$349.32
 - **D** \$439.31
- AJ McCarron runs the 40 yard dash in 4.74 seconds. Logan Thomas runs the 40 yard dash 0.07 seconds faster than AJ McCarron. What is Logan Thomas's time for the 40 yard dash?
 - **A** 4.81
 - **B** 4.67
 - **C** 4.73
 - **D** 4.77

- 6 Solve: 0.34 X 6.9
 - A 2.346
 - **B** 0.2346
 - C 23.46
 - **D** 234.6
- 7 What is the quotient of 3.08 divided by 7?
 - **A** 4.13
 - **B** 0.44
 - C 4.4
 - **D** 0.411
- 8 Four students simplified the expression below.

$$8 + 3 \times 4 \div 2$$

- Ian's solution is 14.
- Karen's solution is 22.
- Alex's solution is 10.
- Jaquan's solution is 17.
- Who simplified the expression correctly?
- **A** Alex
- **B** Karen
- **C** Jaquan
- **D** Ian

9 Look at the fraction of stars that are shaded.



Which decimal can be used to describe the number of stars that are shaded?

- A 0.18
- **B** 0.71
- **C** 0.125
- **D** 0.875
- 10 Evaluate: 9(6-2) 5 + 3
 - **A** 44
 - **B** 50
 - **C** 28
 - **D** 34

11 The chart below shows the seating capacity for 4 college football stadiums.

Stadium	Seating Capacity
Jordan-Hare Stadium (Auburn)	87, 451
Lane Stadium (VT)	66,233
Doak Campbell Stadium (FSU)	82,300
Scott Stadium (UVA)	61,500

How many more people can fit into Lane Stadium than into Scott Stadium?

- **A** 5,333
- **B** 5,733
- **C** 4,333
- **D** 4,733
- Which of the following shows the numbers listed from least to greatest?
 - $\frac{9}{10}$, $1\frac{1}{8}$, $\frac{2}{5}$, 0.239, 1.58
 - **B** 0.239, $\frac{2}{5}$, $\frac{9}{10}$, $1\frac{1}{8}$, 1.58
 - **c** 0.239, $\frac{9}{10}$, 1.58, $\frac{2}{5}$, $1\frac{1}{8}$
 - $1\frac{1}{8}, \frac{2}{5}, \frac{9}{10}, 1.58, 0.239$

13 A mistake was made in simplifying the expression below.

Simplify:
$$\frac{3+7(3)-6}{2}$$

Step 1:
$$\frac{10(3)-6}{2}$$

Step 2:
$$\frac{30-6}{2}$$

Step 3:
$$\frac{24}{2}$$

In which step was the mistake made?

- A Step 1
- B Step 2
- C Step 3
- D Step 4

- A 35.015
- **B** 0.35015
- **C** 37.94
- **D** 3.794

Morgan is $47\frac{1}{8}$ inches tall. Ronnie is $3\frac{1}{2}$ inches taller than Morgan. How tall is Ronnie?



Euro Carantonia de la companya della companya della companya de la companya della companya della

Ronnie

Morgan

- **A** $50\frac{5}{8}$
- **B** $43\frac{5}{8}$
- **c** $50\frac{1}{5}$
- **D** $44\frac{3}{8}$

- Tyler ate $\frac{4}{10}$ of the pizza and his friend Lance ate $\frac{1}{3}$ of the same pizza. 16 How much of the pizza was left?

 - 11 15 D

Greater Richmond Area SOL Simulation – Grade 5

Section 2: You may use a calculator for the remainder of the items.

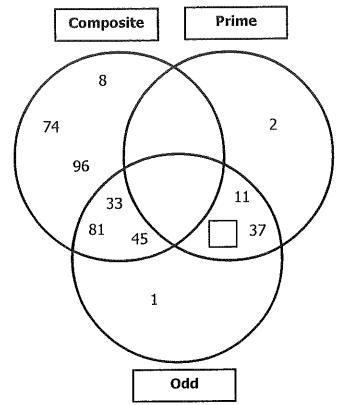
17 Which statement is NOT true?

- A The sum of two odd numbers is even.
- B The difference between two odd numbers is odd.
- The difference between an odd number and an even number is an odd number.
- **D** The sum of two even numbers is even.

18 A room is 14.873 meters wide. What is the width of the room rounded to the nearest whole?

- **A** 20
- **B** 10
- **C** 15
- **D** 14

19 Use the Venn diagram.



Which number would go in the box?

- **A** 21
- **B** 69
- **C** 57
- **D** 43

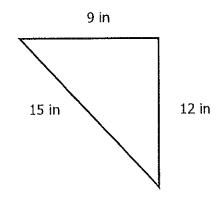
20 Which number will NOT round to 8.26?

- **A** 8.256
- **B** 8.264
- **C** 8.257
- **D** 8.265

21 Which problem can be solved by finding the volume?

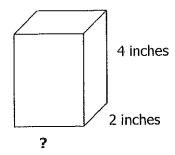
- A Shaniqua wants to put glass in a picture frame. How much glass does she need?
- Christian wants to put up a fence in his backyard. How much fencing does he need?
- Alexandra is placing cereal boxes into large containers. How many cereal boxes can fit in each large container?
- Paul ran along the lines on the edge of a soccer field. How far did he run?

22 What is the area of the right triangle below?



- A 90 in²
- **B** 54 in²
- **C** 36 in²
- **D** 108 in²

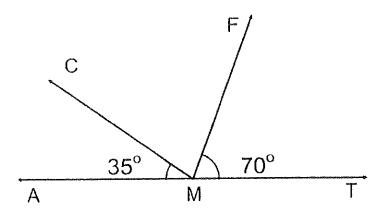
The volume of the box below is 24 cubic inches. The height of the box is 4 inches and the width of the box is 2 inches. Which of the following is the length of the box?



- A 8 inches
- **B** 6 inches
- **C** 5 inches
- **D** 3 inches

- The basketball game ended at 12:46 pm. If the basketball players played for a total of 2 hours and 13 minutes, then what time did the game start?
 - **A** 10:33 am
 - **B** 11:33 am
 - **C** 1:59 pm
 - **D** 2:59 pm

25 If angle AMT is a straight angle, then what is the measurement of angle FMC?

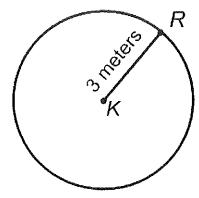


- **A** 55°
- **B** 75°
- **C** 105°
- **D** 180°

- Which of the following quadrilaterals has exactly one pair of parallel sides?
 - A Rhombus
 - **B** Square
 - **C** Trapezoid
 - **D** Rectangle

- 27 Kevin was walking his horse around a circle path.
 - Kevin was standing in center of the circle at point K
 - The horse was standing at point R
 - The distance between Kevin and his horse was 3 meters long

About how many meters would the horse have to walk in order to complete the circle?



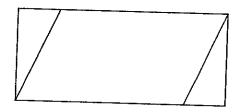
- A About 6 meters
- **B** About 9 meters
- C About 18 meters
- **D** About 30 meters

- 28 Based on the measures of the angles below, which of the following would be classified as an obtuse triangle?
 - **A** 30°, 40°, 110°
 - **B** 45°, 90°, 45°
 - **C** 60°, 60°, 60°
 - **D** 50°, 65°, 65°

29 Based on the table below, what could be the length of the third side in order for it to be classified as an isosceles triangle?

Side	Measurement of side (in)
1	10 inches
2	6 inches
3	?

- A 4 inches
- B 5 inches
- C 6 inches
- **D** 7 inches
- Look at the quadrilateral below, if one of the right triangles was removed from the figure, then which of the following would best describe the new figure?

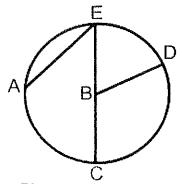


- A Square
- **B** Rhombus
- **C** Parallelogram
- **D** Trapezoid

31 The average height of a giraffe is 5.5 meters. How many centimeters tall is the giraffe?

- A 55 centimeters
- **B** 550 centimeters
- **C** 5,500 centimeters
- **D** 55,000 centimeters

Which of the following is the radius of the circle if point B is the center of the circle?



- A line segment EA
- B line segment EC
- C line segment BD
- D line segment CD

- 33 Shannon collected data for a science experiment measuring the growth of a plant in inches. The data included: 2, 3, 5, 6, 8, 11, 13, 14. What is the variation of the data?
 - **A** 2
 - B 7
 - **C** 8
 - **D** 12
- Which model best shows how the distributive property can be used to find the product of 16 x 5?

A

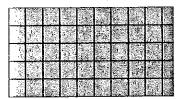


В





C





D



Randy collects data by measuring several people to see how tall they are in inches. The data includes: 55, 40, 58, 41, 50, 48, 41, 53, 39, 46. Which stem and leaf plot correctly shows their height?

A Height in Inches

Ste m		Leaf	
3	0		
4	0		
5	0		

Key: 5 0 means 50

Height in Inches

Ste m	Leaf
3	9
4	01168
5	0358

Key: 5 0 means 50

c Height in Inches

Ste m	Leaf
3	9
4	0168
5	0 3 5 8

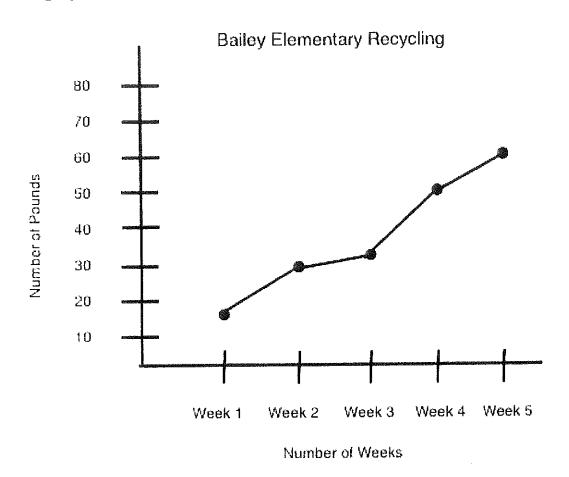
Key: 5 0 means 50

D Height in Inches

Ste m	Leaf
3	9
4	1168
5	3 5 8

Key: 5 0 means 50

36 Bailey Elementary collected paper to recycle. They made a graph to show the number of pounds that they collected each week. Below is the graph that they made.



If the trend in the graph continues, how many pounds of paper will they collect Week 6?

- **A** 50
- **B** 60
- **C** 75
- **D** 90

Using the following sample space created by rolling two fair number cubes and finding their total, what is the probability that a 7 will be rolled?

2	3	4	5	6	7
3	4	5	6	7	8
4	5	6	7	8	9
5	6	7	8	9	10
6	7	8	9	10	11
7	8	9	10	11	12

- $\frac{1}{6}$
- $\mathbf{B} \quad \frac{2}{3}$
- $\mathbf{c}^{\frac{1}{4}}$
- **D** 1
- Donnie and three of his friends mowed lawns in the neighborhood. By the end of the summer they had earned \$440.00. They split the money so that they each got the same amount. They each received a
 - A range of data
 - **B** refund
 - **C** fair share
 - **D** median

39 Mr. Hart's class kept track of how many times they could snap their fingers in one minute. They created the following stem and leaf plot.

Finger Snaps in a Minute

Stem	Leaf	
0	6, 7	_
1	1, 2, 2, 5, 7	_
2	0, 3, 3, 6, 8	
3	0, 1, 8, 9	-
4	2	-

Based on this stem and leaf plot, what is the least amount of times that a student snapped their fingers in a minute?

- **A** 0
- **B** 2
- **C** 4
- **D** 6

40 Which choice shows an open sentence?

- **A** 3 × 8 7
- **B** $\frac{11}{2} = 8$
- **C** 6 + 4n
 - [
- $\mathbf{D} = \overline{2} = 3$

The table below shows what happens when four numbers go into a number machine.

In	Out
2	14
3	21
5	35
8	56

Which table below could be the results from the same machine?

Α

In	Out
2	14
3	15
5	17
8	20

В

In	Out
14	2
21	3
35	5
56	8

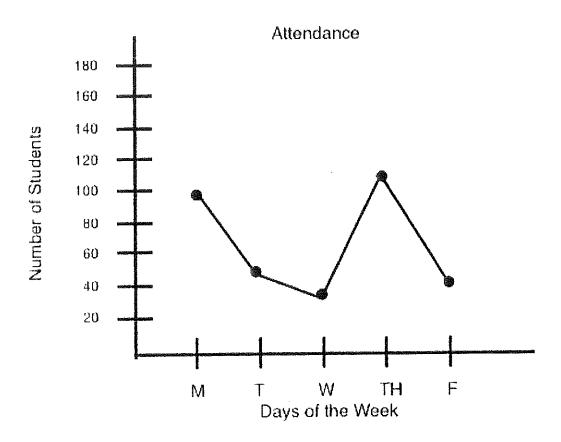
C

In	Out
4	28
7	49
9	63
12	84

D

In	Out
4	11
6	13
7	14
9	16

42 Last year, the flu broke out in December. Many students in 5th grade missed school. The following line graph shows the attendance for 5th grade during the second week of December.



Which statement is true about the graph?

- A The lowest attendance was on Tuesday.
- **B** More 5th grade students attended on Friday than on Monday.
- **C** The attendance decreased over the entire week.
- **D** The day with the highest attendance was Thursday.

Jerome is packing his lunch in a bag. He can choose 1 sandwich, 1 fruit, and 1 dessert. The table shows all of the different sandwiches, fruits and desserts that he can put in his bag.

Sandwiches	Fruits	Desserts
Peanut Butter	Apple	Cookie
Ham and Cheese	Orange	Brownie
Turkey		

- What is the probability that he would create a lunch containing an apple?
- $\mathbf{A} \qquad \frac{1}{7}$
- $\frac{1}{6}$
- **c** $\frac{1}{2}$
- **D** $\frac{1}{12}$
- Tool Hardware Store kept track of the number of people who came to the store each day for one week. The following is the data that they collected: 32, 58, 47, 24, 73, 32, and 49. What is the median of this data?
 - **A** 32
 - **B** 45
 - **C** 47
 - **D** 24

45 Which problem could be solved using the open sentence 4t = 12?

- A Kaelyn ran 4 miles on Monday. She ran some more on Tuesday. By the end of her run on Tuesday, she had run 12 miles. How many miles did she run on Tuesday?
- **B** Kaelyn ran 4 days this week. She ran 12 miles this week. How many miles did she run each day?
- C Kaelyn ran 12 miles last week. She ran 4 times as many miles this week. How many miles did she run this week?
- **D** Kaelyn ran 12 miles on Monday. She ran 4 fewer miles on Tuesday. How many miles did she run on Tuesday?

46 Which equation shows the use of the distributive property?

A
$$12 \times 5 \times 2 = 5 \times 12 \times 7$$

B
$$(5 \times 9) \times 6 = 5 \times (9 \times 6)$$

C
$$4(3) + 4(2) = 4(3 + 2)$$

D
$$14(4+2) = 14 \times 4 + 2$$

Which pattern follows the rule "multiply by 6" to find each number after the first?

Which open sentence represents "a number, b, decreased by 23 is 456"?

A
$$b + 23 = 456$$

B
$$b - 23 = 456$$

C
$$b \times 23 = 456$$

D
$$b \div 23 = 456$$

49 Which property is demonstrated by this equation?

$$7 \times 3 + 7 \times 6 = 7 \times (3 + 6)$$

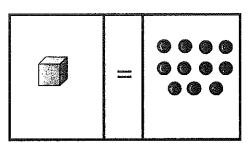
- A Associative
- **B** Distributive
- **C** Commutative
- **D** Identity

50 Look at this open sentence.

$$7 = d + 3$$

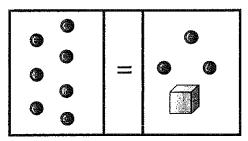
Use the key shown. Which equation mat represents the open sentence?

A



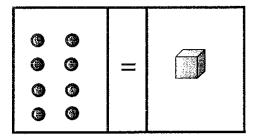
Key

В



Key

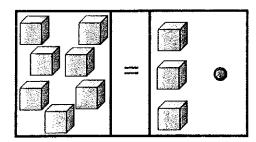
C



Key



D



Key

$$= d$$