LEAP

Mathematics

2016 Practice Test

Grade 3

DEPARTMENT of EDUCATION

Louisiana Believes

Session 1

Directions:

Today, you will take Session 1 of the Grade 3 Mathematics Test. You will not be able to use a calculator in this session.

Read each question. Then, follow the directions to answer each question. Mark your answers by completely filling in the circles in your test booklet. Do not make any pencil marks outside of the circles. If you need to change an answer, be sure to erase your first answer completely.

If a question asks you to show or explain your work, you must do so to receive full credit. Only responses written within the provided space will be scored.

If you do not know the answer to a question, you may go to the next question. If you finish early, you may review your answers and any questions you did not answer in this session **ONLY**. Do not go past the stop sign.

GO ON ►

Directions for Completing the Answer Grids

1. Work the problem and find an answer.
2. Write your answer in the boxes at the top of the grid.
3. Print only one number or symbol in each box. Do not leave a blank box in the middle of an answer.
4. Under each box, fill in the circle that matches the number or symbol you wrote above. Make a solid mark that completely fills the circle.
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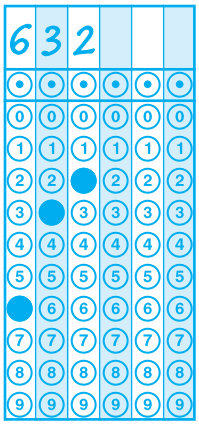
6. See below for an example on how to correctly complete an answer grid.

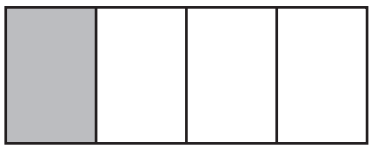
To answer 632 in a question, fill in the answer grid as shown below in your Test Booklet.



GO ON ►

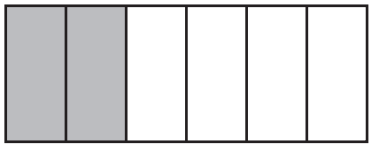
1. Which shape represents a fraction that is equal to $\frac{1}{3}$?

Ⓐ



Ⓑ

Ⓒ



Ⓓ

GO ON ▶

2. Kayla has a rectangular garden. The area of her garden is 40 square feet. Which pairs of measurements could be the length and width of Kayla's garden?

Select the **two** correct answers.

Ⓐ length = 4 feet, width = 10 feet

Ⓑ length = 6 feet, width = 20 feet

Ⓒ length = 8 feet, width = 5 feet

Ⓓ length = 10 feet, width = 10 feet

Ⓔ length = 30 feet, width = 5 feet

Ⓕ length = 40 feet, width = 4 feet

3. A block of clay is divided into 4 equal pieces. Lucy receives 3 of the pieces. What fraction of the whole block of clay does Lucy have?

   Ⓐ $\frac{1}{4}$

   Ⓑ $\frac{1}{3}$

   Ⓒ $\frac{2}{3}$

   Ⓓ $\frac{3}{4}$

4. Lupe is buying 3 bags of pears. There are 5 pears in each bag. Which expression can be used to find the total number of pears Lupe is buying?

   Ⓐ $3 + 3$

   Ⓑ 3×3

   Ⓒ $3 + 5$

   Ⓓ 3×5

GO ON ▶

5. Angela started picking apples at 3:25 P.M. She finished picking apples at 3:42 P.M. How many minutes did Angela spend picking apples?

Ⓐ 17

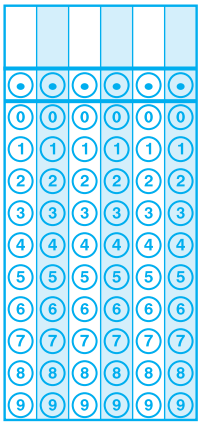
Ⓑ 23

Ⓒ 25

Ⓓ 47

6. What whole number is equal to $\frac{5}{1}$?

Enter your answer in the box.

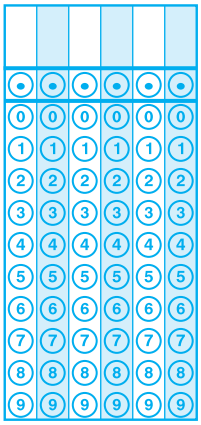


GO ON ▶

7. Complete this number sentence.

   3 × 90 = ☐

   Enter your answer in the box.



8. Which expressions have the same quotient as 36 ÷ 9?

   Select the **three** correct answers.

   Ⓐ 12 ÷ 3

   Ⓑ 16 ÷ 4

   Ⓒ 21 ÷ 7

   Ⓓ 30 ÷ 6

   Ⓔ 32 ÷ 8

GO ON ▶

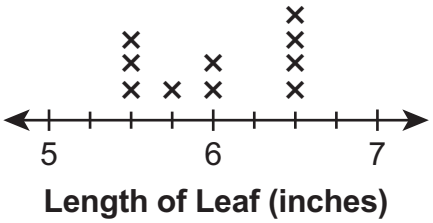
9. Eric measures 10 leaves with a ruler. He records the lengths as shown.

Lengths of Leaves (inches)

$$5\frac{1}{2}, 6\frac{1}{2}, 6\frac{1}{2}, 6, 5\frac{3}{4}, 5\frac{1}{2}, 6, 6, 5\frac{1}{2}, 6$$

Which line plot shows the lengths of the leaves recorded correctly?

Ⓐ



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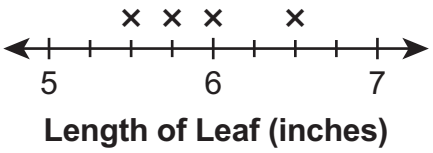

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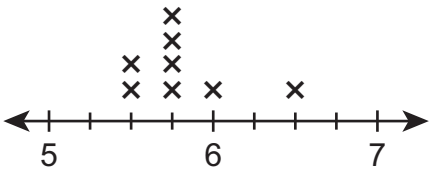

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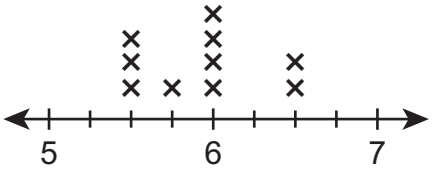
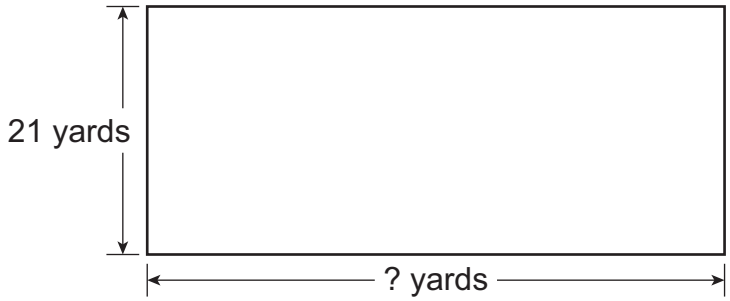


GO ON ►

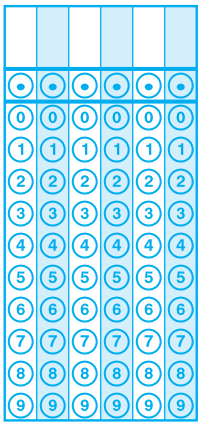
10. **Part A**

The rectangular garden at River Valley School is represented in the figure. The perimeter of the garden is 122 yards.



What is the missing side length, in yards, in the figure?

Enter your answer in the box.



Part B

River Valley School builds a new rectangular garden with the same perimeter, but the side lengths are different.

Which of these could be the side lengths of the new garden?

Ⓐ 15 yards by 48 yards

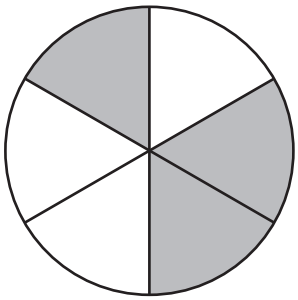
Ⓑ 14 yards by 47 yards

Ⓒ 13 yards by 57 yards

Ⓓ 14 yards by 58 yards

GO ON ▶

11. The circle below represents 1 whole. Each part of the circle is of equal size.



What fraction represents the shaded parts of the circle?

Ⓐ $\frac{1}{6}$

Ⓑ $\frac{1}{3}$

Ⓒ $\frac{3}{6}$

Ⓓ $\frac{3}{3}$

GO ON ▶

Use the information provided to answer Part A and Part B for question 12.

12. Jeanie has different colored buttons as shown. She wants to determine the total number of buttons she has altogether.

- 20 blue
- 19 orange
- 31 red
- 28 yellow

Part A

Jeanie explains there are a total of 818 buttons because 0 + 9 + 1 + 8 = 18 in the ones place, so she writes down 18. Then 2 + 1 + 3 + 2 = 8 in the tens place, so she writes down 8 in front of the 18.

Explain why Jeanie's reasoning is incorrect. Find the total number of buttons she has altogether.

Enter your answer and your explanation in the box provided.

GO ON ►

Part B

Jeanie explains there are 28 more red buttons than orange buttons because the smaller number is always subtracted from the larger number. So she got 9 – 1 = 8 in the ones place and 3 – 1 = 2 in the tens place.

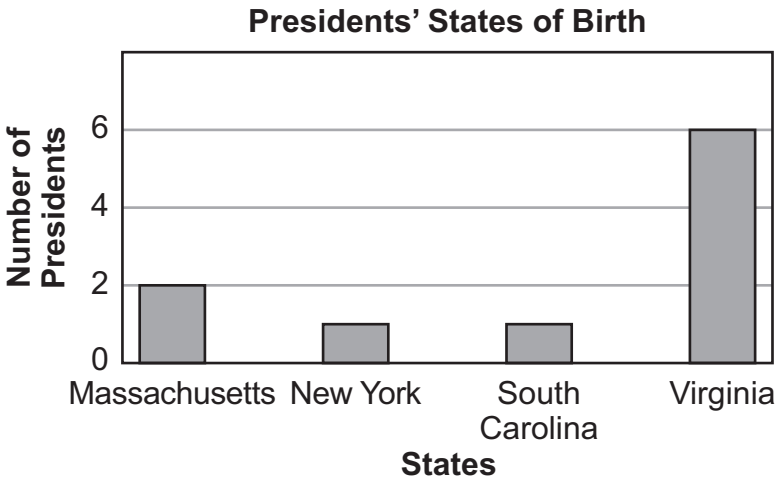
Explain why Jeanie's reasoning is incorrect. Find how many more red buttons than orange buttons she has.

Enter your answer and your explanation in the box provided.

GO ON ►

Use the information provided to answer Part A and Part B for question 13.

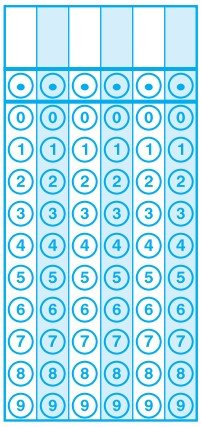
13. The first 10 presidents of the United States were born in four states. The bar graph shows the number of presidents born in each state.



Part A

How many more presidents were born in Virginia than in New York?

Enter your answer in the box.



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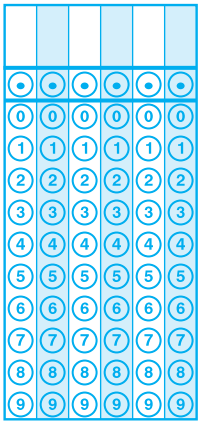
Part B

What is the difference between the number of presidents born in Massachusetts and the number of presidents born in New York and South Carolina together?

Enter your answer in the box



GO ON ►

14. Mr. Haley bought a total of 36 pictures. The pictures are only sold in packages. Each package came with 4 small pictures, 3 medium pictures, and 2 large pictures.

How many pictures were in each package? Show your work.

How many packages did he buy? Show your work.

Enter your answers and your work in the box provided.

STOP

Session 2

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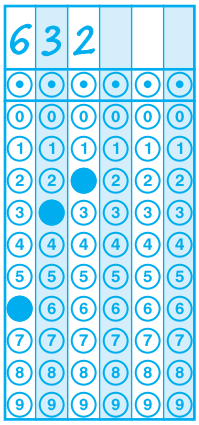
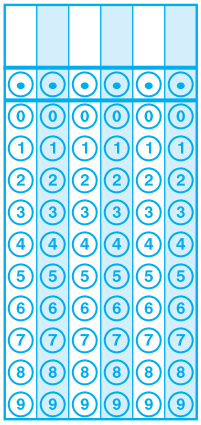


GO ON ►

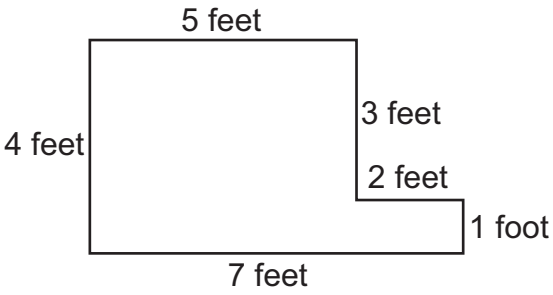
15. What is the value of 3 × 6?

Enter your answer in the box.



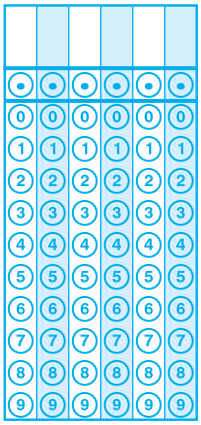
16. A picture of the floor of Audrey's closet is shown below.

Audrey's Closet



What is the area, in square feet, of the floor of Audrey's closet?

Enter your answer in the box.



GO ON ▶

17. Mr. Davis has 24 students in his classroom. He wants to divide his students into groups.

    - Each group will have the same number of students.
    - Each student will be assigned to a group.

    In which ways could Mr. Davis divide his students into groups?

    Select the **three** correct answers.

    Ⓐ 3 students in each group

    Ⓑ 4 students in each group

    Ⓒ 5 students in each group

    Ⓓ 6 students in each group

    Ⓔ 7 students in each group

18. Which fraction makes the following comparison true?

$$\frac{3}{6} > ?$$

    Ⓐ $\frac{3}{4}$

    Ⓑ $\frac{3}{8}$

    Ⓒ $\frac{4}{6}$

    Ⓓ $\frac{6}{6}$

19. Mrs. Jones will plant 28 apple trees in 7 rows. She writes the equation shown to find the number of trees to plant in each row.

$$7 \times \square = 28$$

    How many trees will Mrs. Jones plant in each row?

    Ⓐ 3

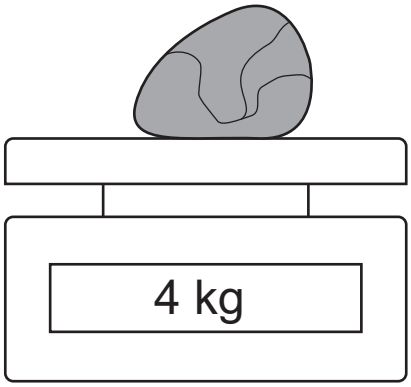
    Ⓑ 4

    Ⓒ 21

    Ⓓ 35

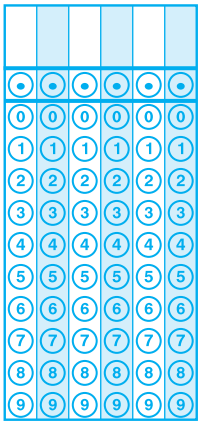
GO ON ►

20. Curt has 6 rocks. Each rock has the same mass. One of the rocks is shown on a scale below.



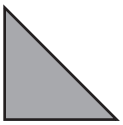
What is the total mass, in kilograms, of Curt's 6 rocks?

Enter your answer in the box.



GO ON ▶

21. Which **three** shapes are quadrilaterals?

Ⓐ 

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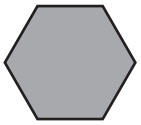
Ⓒ 

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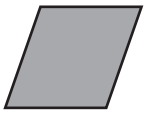
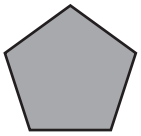
Ⓔ 

Ⓕ 

GO ON ▶

22. Craig and Diane each bought one eraser. Their erasers were the same size. After one month, Craig had $\frac{1}{3}$ of his eraser left. Diane had $\frac{1}{4}$ of her eraser left. Which number sentence correctly compares the amount of eraser Craig had left to the amount Diane had left?

Ⓐ $\frac{1}{3} < \frac{1}{4}$

Ⓑ $\frac{1}{3} = \frac{1}{4}$

Ⓒ $\frac{1}{3} > \frac{1}{4}$

23. Kerry wrote the equation below.

$27 \div 3 = ?$

Which equation has the same value for the ? as in Kerry's equation?

Ⓐ $? \times 3 = 27$

Ⓑ $3 \times 27 = ?$

Ⓒ $? \div 3 = 27$

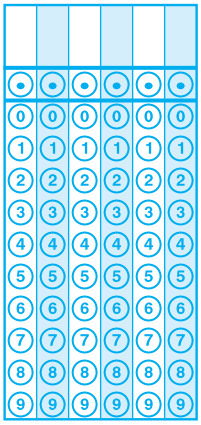
Ⓓ $3 \div 27 = ?$

GO ON ▶

24. Mr. Caden builds a fence around his rectangular backyard that is 8 meters long and 7 meters wide.

What is the perimeter, in meters, of the backyard?

Enter your answer in the box.



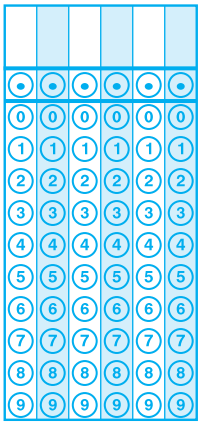
GO ON ►

25. **Part A**

Freda buys horse food in 20-kilogram bags. Her horse eats 8 bags of horse food per month.

How much horse food, in kilograms, does Freda's horse eat in one month?

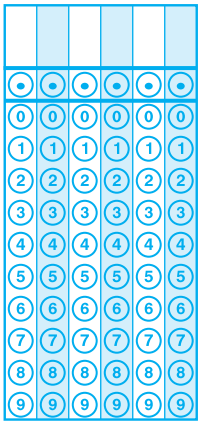
Enter your answer in the box.



Part B

Freda's horse has a mass of 782 kilograms. Kurt's pony has a mass of 359 kilograms. How much more mass, in kilograms, does Freda's horse have than Kurt's pony?

Enter your answer in the box.



GO ON ▶

26. Mia placed point *P* on the number line.

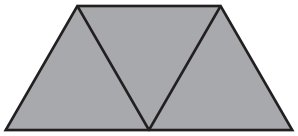
- Give the value of the number *P* as a fraction.
- What does the denominator of your fraction represent on the number line?
- What does the numerator of your fraction represent on the number line?

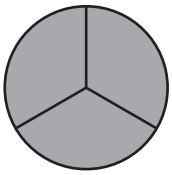
Enter your answer and your explanation in the box provided.

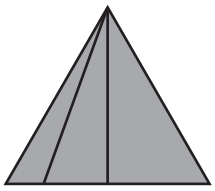
GO ON ►

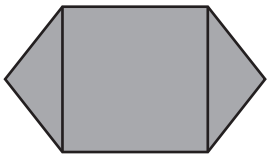
27. Which shapes are divided into thirds?

Select the **three** correct answers.

Ⓐ 

Ⓑ 

Ⓒ 

Ⓓ 

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GO ON ▶

28. Andre visits the library. It takes Andre 26 minutes to walk from his house to the library. He stays at the library 45 minutes. His mother drives him home, which takes 15 minutes. How many more minutes does Andre spend at the library than traveling to and from the library?

Show all the steps for solving the problem. Explain each step and give the final answer.

Enter your answer, your work, and your explanation in the box provided.

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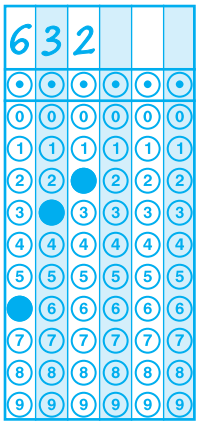
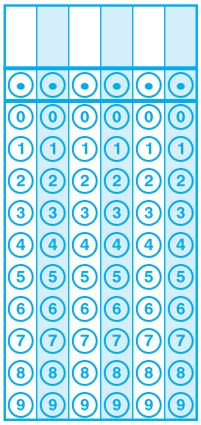


GO ON ►

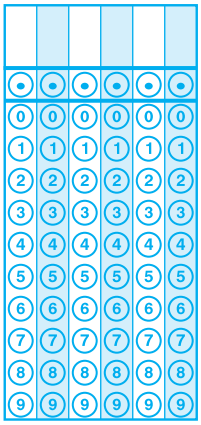
29. Tyler has 14 shirts and 2 bags. He packs the same number of shirts into each bag. How many shirts does Tyler pack into each bag?

    Enter your answer in the box.



30. A patio is in the shape of a rectangle with a width of 8 feet and a length of 9 feet. What is the area, in square feet?

    Enter your answer in the box.



GO ON ▶

31. Which fraction is equal to a whole number that is greater than 1?

Ⓐ $\frac{3}{1}$

Ⓑ $\frac{4}{4}$

Ⓒ $\frac{4}{3}$

Ⓓ $\frac{1}{3}$

32. Which expressions are equal to the given expression?

157 + 748

Select the **three** correct answers.

Ⓐ 150 + 755

Ⓑ 200 + 700

Ⓒ 90 + 5

Ⓓ 900 + 5

Ⓔ (160 + 750) – (3 + 2)

Ⓕ (9 + 100) + (0 + 10) + (5 + 1)

33. Which problem can be solved using the expression 3 × 4?

Ⓐ A house has 3 rooms on the first floor and 4 rooms on the second floor. How many total rooms does the house have?

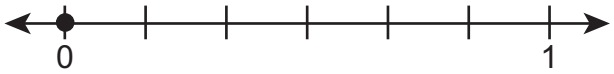
Ⓑ A group of 4 friends share 3 large pizzas. How much pizza does each friend get?

Ⓒ A shopping center has 3 floors, and each floor has 4 stores. How many total stores does the shopping center have?

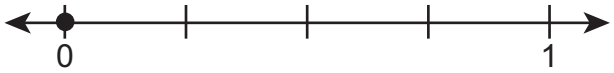
Ⓓ A group of friends spend $4 on French fries and $3 on drinks. How much do they spend on food and drinks?

34. Which number line shows a point at $\frac{1}{6}$?

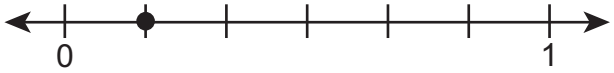
Ⓐ



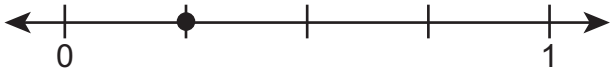
Ⓑ



Ⓒ



Ⓓ



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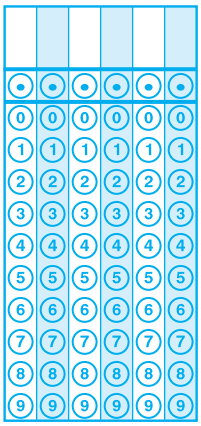
35. Divide.

42 ÷ 6 = ?

Enter your answer in the box.



36. Jamal plays the piano. Each day, he plays for 30 to 45 minutes. Yesterday, he began playing the piano at 3:20. What could be the time Jamal finished playing the piano yesterday?

Select the **two** correct answers.

Ⓐ 3:30

Ⓑ 3:45

Ⓒ 3:55

Ⓓ 4:05

Ⓔ 4:10

GO ON ►

37. Jason baked some cookies. Of the cookies he baked, $\frac{2}{4}$ were sugar cookies. Which fractions are equivalent to the fraction of sugar cookies Jason baked?

Select the **two** correct answers.

Ⓐ $\frac{1}{4}$

Ⓑ $\frac{1}{3}$

Ⓒ $\frac{1}{2}$

Ⓓ $\frac{2}{1}$

Ⓔ $\frac{4}{6}$

Ⓕ $\frac{4}{8}$

GO ON ▶

38. Tori makes a number pattern that uses the rule “subtract 4.” Which pattern could be Tori’s pattern?

Ⓐ 5, 20, 80, 320, . . .

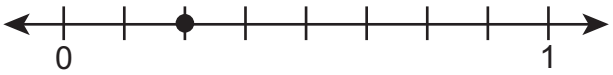
Ⓑ 18, 22, 26, 30, . . .

Ⓒ 49, 45, 41, 37, . . .

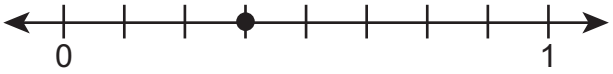
Ⓓ 54, 44, 34, 24, . . .

39. Which number line has a point located at $\frac{3}{8}$?

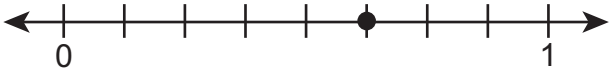
Ⓐ



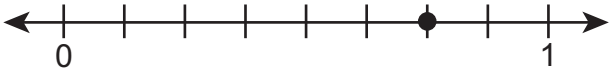
Ⓑ



Ⓒ



Ⓓ



GO ON ►

40. **Part A**

Fred has 36 stuffed animals that he will give to 9 different friends. He will give an equal number of stuffed animals to each friend. Fred uses the equation 36 ÷ 9 = ? to find how many stuffed animals he will give to each friend.

He thinks the ? equals 3. Explain why he is wrong.

Enter your explanation in the box provided.

GO ON ►

Part B

Find the correct answer using Fred's equation.

Enter your answer in the box provided.

GO ON ►

Part C

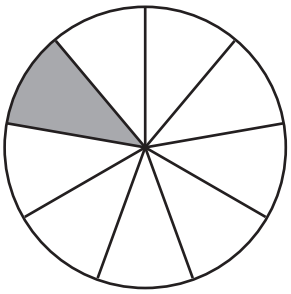
How would you use multiplication to find the number of stuffed animals Fred gives each friend?

Enter your answer in the box provided.

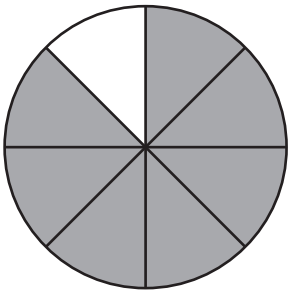
GO ON ►

41. Which circle is divided into 8 equal parts and has $\frac{1}{8}$ **shaded**?

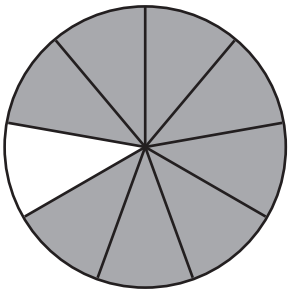
Ⓐ **Circle**



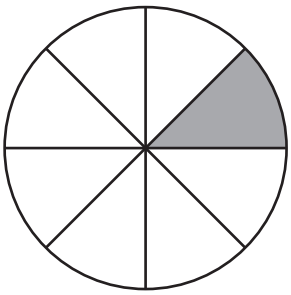
Ⓑ **Circle**



Ⓒ **Circle**



Ⓓ **Circle**



GO ON ►

Use the information provided to answer Part A through Part D for question 42.

42. The Lions and Bulldogs played a basketball game. The scoreboard is shown.

	1st Half	2nd Half	Score
Lions	28	35	
Bulldogs	32	29	

Part A

How many total points did the Lions score?

Ⓐ 51
Ⓑ 53
Ⓒ 61
Ⓓ 63

Part B

How many total points did the Bulldogs score?

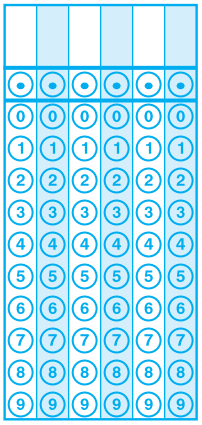
Ⓐ 51
Ⓑ 53
Ⓒ 61
Ⓓ 63

GO ON ▶

Part C

When the first half ended, how many more points did the Bulldogs have than the Lions?

Enter your answer in the box.



GO ON ►

Part D

The top two scorers for the Lions scored 25 points and 12 points.

How many points did the rest of the team score?

Show the steps you used to solve the problem.

Enter your answer and your work in the box provided.

STOP

STATE BOARD OF ELEMENTARY AND SECONDARY EDUCATION
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1 Excerpts from *Bulletin 118*

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