Student Name: _____

Ohio Achievement Assessments

Grade
4
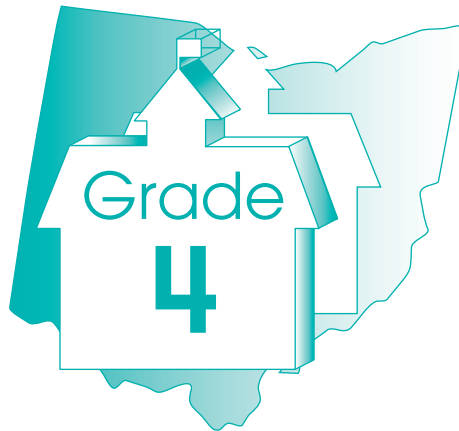
Mathematics
Student Test Booklet
Spring 2010

This test was originally administered to students in Spring 2010.

Not all items from the Spring 2010 administration will be released in this document. According to Ohio Revised Code (ORC) 3301.07.11:4(b) . . . not less than forty percent of the questions on the test that are used to compute a student's score shall be a public record. The department (of education) shall determine which questions will be needed for reuse on a future test and those questions shall not be public records and shall be redacted from the test prior to its release as public record.

This publicly released material is appropriate for use by Ohio teachers in instructional settings. This test is aligned with Ohio's Academic Content Standards for Mathematics.

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Directions:

Today you will be taking the Ohio Grade 4 Mathematics Achievement Assessment. This test consists of questions about numbers, measurement, shapes, graphs, and patterns. Three different types of questions appear on this test: multiple choice, short answer and extended response.

There are several important things to remember:

1. Read each question carefully. Think about what is being asked. Look carefully at graphs or diagrams because they will help you understand the question. Then, choose or write the answer you think is best.

2. Use <u>only</u> a #2 pencil to answer questions on this test.

3. For multiple-choice questions, fill in the circle next to your answer choice. Mark <u>only</u> one answer for each question. If you change your answer, make sure you erase your old answer completely. Do not cross out or make any marks on the other choices.

4. For constructed-response questions, write your answer neatly, clearly and <u>only</u> in the space provided. Answers written outside of the space provided will <u>not</u> be scored.

5. If you do not know the answer to a question, skip it and go on to the next question. If you have time, go back to the questions you skipped and try to answer them before turning in your Student Test Booklet.

6. Check over your work when you are finished.

7. When you finish this section of the test, you may **<u>NOT</u>** go back to the reading section in the Student Test Booklet.

1. There are 1,064 students at Gateway Elementary School.

    What is this number in words?

    ○ A. one hundred six hundred four

    ○ B. one thousand sixty-four

    ○ C. one hundred sixty-four

    ○ D. one thousand six hundred four

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2. On Monday, a class sold 25 ice cream cups. Each day, the students sold 20 more ice cream cups than the day before.

Which table shows the number of ice cream cups the students sold each day during the week?

○ A.

Weekday	Number of Cups Sold
Monday	25
Tuesday	20
Wednesday	20
Thursday	20
Friday	20

○ B.

Weekday	Number of Cups Sold
Monday	25
Tuesday	25
Wednesday	25
Thursday	25
Friday	25

○ C.

Weekday	Number of Cups Sold
Monday	25
Tuesday	20
Wednesday	40
Thursday	60
Friday	80

○ D.

Weekday	Number of Cups Sold
Monday	25
Tuesday	45
Wednesday	65
Thursday	85
Friday	105

3. The graph shows the number of tickets a movie theater sold in each of 4 months.
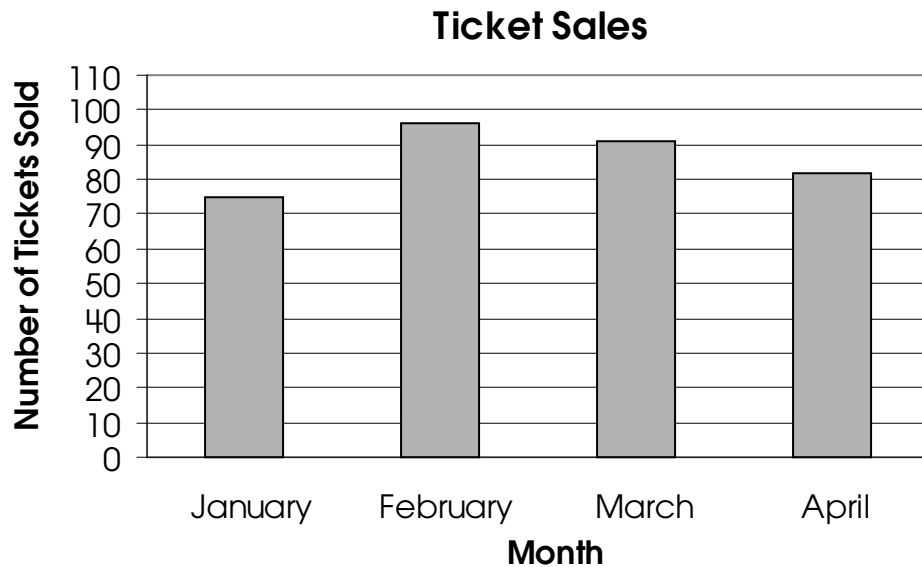
Ticket Sales
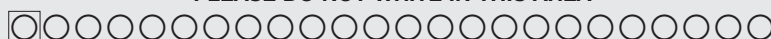

Which statement about the ticket sales is true?

- ○ A. The movie theater sold 89 tickets in April.
- ○ B. The movie theater sold the most tickets in March.
- ○ C. The movie theater sold the fewest tickets in January.
- ○ D. The movie theater sold the same number of tickets in February and March.

Item 4 has not been slated for public release in 2010.

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5. Kim needs to measure a quart of water to make some juice.

    She has two different-sized measuring containers. Container A holds one cup and container B holds one pint.

Which container, A or B, will she have to fill the fewest times to measure the water she needs? _____

Use pictures, numbers or words to explain how you decided between the containers.

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6.   Which group of numbers are all multiples of 3?

    ○ A. 7,   10,   13

    ○ B. 9,   15,   21

    ○ C. 3,   7,   11

    ○ D. 13,   23,   33

Item 7 has not been slated for public release in 2010.

8. Renee draws the shapes below on a piece of paper. She continues the pattern.

□ △ △ ○ □ △ △ ○ □ __ __ __
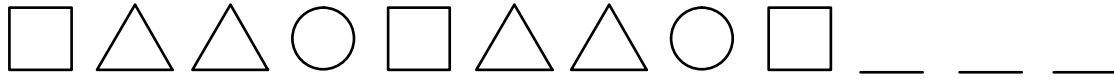
What are the next 3 shapes Renee draws?

○ A. □ △ △

○ B. △ ○ □

○ C. △ △ ○

○ D. □ △ ○

Items 9–11 have not been slated for public release in 2010.

12.   Which could be measured in cubic inches?

○   A.   surface of a desk

○   B.   weight of a radio

○   C.   length of a piece of string

○   D.   amount of air in a soccer ball

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13. The table shows how the expected attendance at a concert changes as the price of a ticket changes.

Concert Planning

Ticket Price	Expected Attendance
$4	800
$6	700
$8	600
$10	500

Which describes how the expected attendance changes as the ticket price changes?

○ A. As the price increases, the tickets sold decreases.

○ B. As the price increases, the tickets sold increases.

○ C. As the price doubles, the tickets sold is halved.

○ D. As the price decreases by $2, the tickets sold increases by 200.

Items 14–15 have not been slated for public release in 2010.

16. Erica ran the first half of a race in 18.25 seconds. She ran the last half of the race in 16.38 seconds.

How much time did it take Erica to run the whole race?

○ A. 24.53 seconds

○ B. 24.63 seconds

○ C. 34.53 seconds

○ D. 34.63 seconds

Item 17 has not been slated for public release in 2010.

18. Mike is thinking of a number *n*. He knows that ten times the number is less than 70.

Which inequality describes this situation?

○ A. $10 \times n < 70$

○ B. $10 \times n > 70$

○ C. $10 \times 70 < n$

○ D. $10 \times 70 > n$

Items 19–21 have not been slated for public release in 2010.

On the Spring 2010 Grade 4 Mathematics Achievement Assessment, items 22–27 are field-test items, which are not released.

Items 28–31 have not been slated for public release in 2010.

32. Which unit is appropriate for measuring the distance around a school building?

○ A. feet

○ B. cubic feet

○ C. square feet

○ D. square miles

Item 33 has not been slated for public release in 2010.

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34. Five students each paid $2 to see a play. Some of the students, *M*, spent $5 each to buy popcorn. Altogether, the students spent $30.

Which equation represents this situation?

○ A. $(\$2 \times M) + \$5 = \$30$

○ B. $\$5 \times M = \$30$

○ C. $(5 \times \$2) + (M \times \$5) = \$30$

○ D. $(5 \times \$2) + M = \$30$

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35. Tim's grocery store sells different-sized packages of cheese. Some packages and their weights are shown.

Package A	$\frac{1}{3}$ pound
Package B	$\frac{3}{4}$ pound
Package C	1 pound
Package D	$\frac{1}{2}$ pound
Package E	$\frac{1}{4}$ pound
Package F	$\frac{2}{3}$ pound

Tim wants to arrange the packages of cheese from the package that weighs the least to the package that weighs the most.

Put the weights on the number line in order from least to greatest.

A scale at the store shows that one of the packages weighs 0.5 pounds.

Which package has a weight of 0.5 pounds? _____
Explain how you decided which package weighs 0.5 pounds.

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Item 36 has not been slated for public release in 2010.

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37. Robin is interested in knowing what fruit is most popular among her classmates. She plans to survey her classmates.

Which question should the survey include to get the best results?

○ A. Do you like fruit?

○ B. What fruit do you like with your cereal?

○ C. What is your favorite kind of fruit?

○ D. Do you like apples more than bananas?

38. Chrissy folded her square napkin in half to make a triangle.
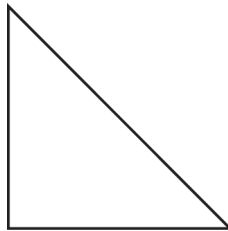
What kind of triangle did Chrissy make?

○ A. acute

○ B. equilateral

○ C. obtuse

○ D. right

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39.   Each week, Jane puts two dollars ($2) into her bank account and her mother puts in an additional dollar ($1).

Construct a table to show the total amount of money Jane will have in her bank account after 1, 2, 3, and 4 weeks.

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40.   Mike found the volume of a bottle.

What does this measure tell him?

○ A. the height of the bottle

○ B. the weight of the bottle

○ C. the amount of liquid the bottle holds

○ D. the distance around the base of the bottle

41.   There are 32 students in Mrs. Smith's class. Each student has 4 pencils.

How many pencils do the students have?

○ A.   92

○ B.   126

○ C.   128

○ D.   184
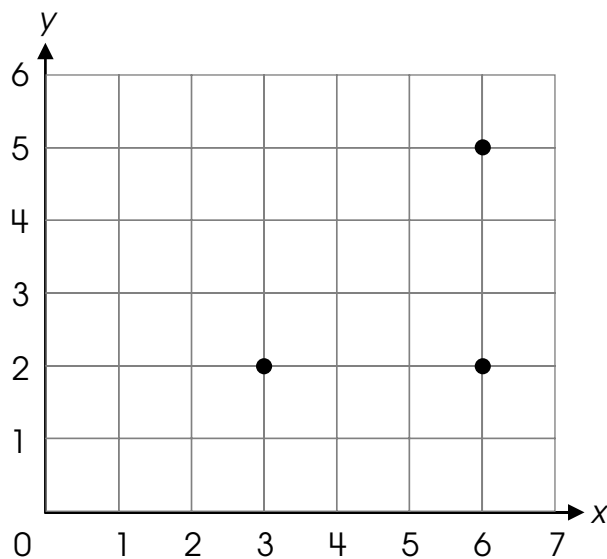
Item 42 has not been slated for public release in 2010.

43.   Tamara is drawing a square on the coordinate grid below. She has already marked three of the four corners.
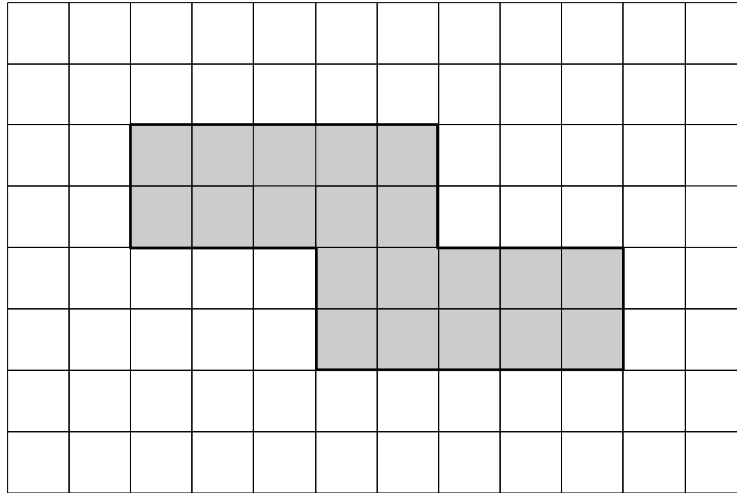

What are the coordinates of the fourth corner?

○   A.   (3, 5)

○   B.   (4, 2)

○   C.   (5, 3)

○   D.   (6, 3)

44.   Antonio made the shape shown on the centimeter grid.

What is the perimeter of Antonio's shape? _____

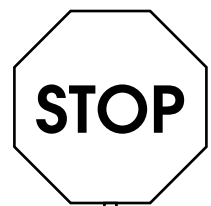Explain how you can find the perimeter of Antonio's shape.

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SERIAL #

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Items 45–46 have not been slated for public release in 2010.

STOP