Ohio | Department of Education

Ohio's State Tests

PRACTICE TEST

GRADE 7 MATHEMATICS

Student Name

_____

Ohio's State Tests Reference Sheet
Grades 6 and 7

1 mile = 1,760 yards

1 mile = 5,280 feet

1 pound = 16 ounces

1 cup = 8 fluid ounces

1 pint = 2 cups

1 quart = 2 pints

1 gallon = 4 quarts

1 kilometer = 1,000 meters

1 meter = 100 centimeters

1 centimeter = 10 millimeters

1 kilogram = 1,000 grams

1 liter = 1,000 milliliters

Directions for Completing the Response Grids

1. Work the problem, and find an answer.

2. Write your answer in the answer boxes at the top of the grid in the **Answer Document**.

    - Write only one digit or symbol in each answer box.

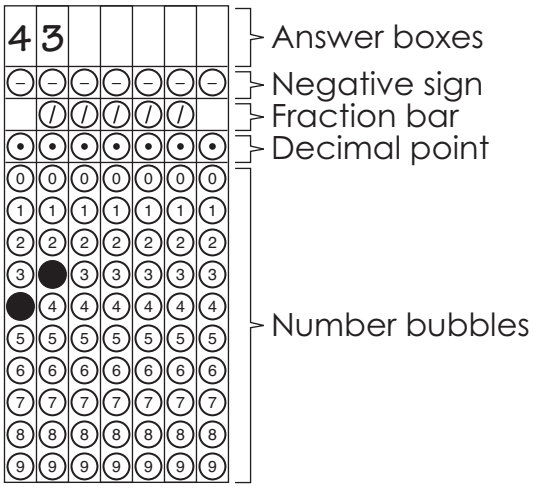
    - Be sure to write a decimal point, negative sign or fraction bar in the answer box if it is a part of the answer.

3. Fill in a bubble under each box in which you wrote your answer in the **Answer Document**.

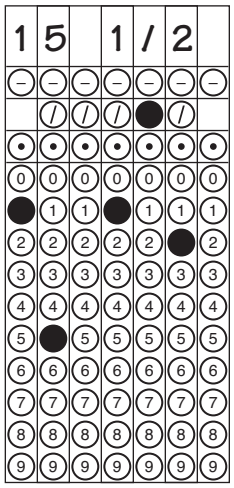
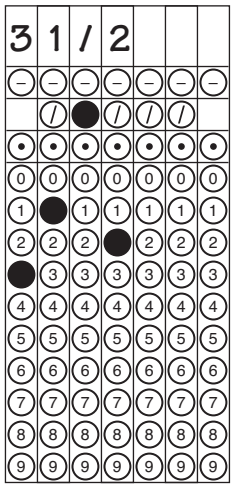
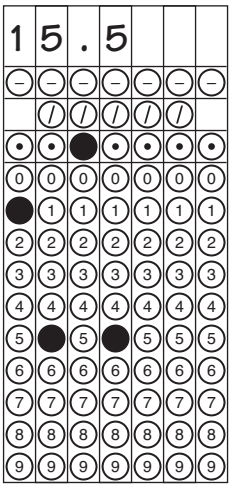
    - Fill in one and ONLY one bubble for each answer box. Do NOT fill in a bubble under an unused answer box.

    - Fill in each bubble by making a solid mark that completely fills the circle.

    - You MUST fill in the bubbles accurately to receive credit for your answer.



You can record a mixed number in several different ways. You can write it as:

a. A whole number and a fraction (15 1/2). Be sure to include a space between the whole number and the fraction. 	b. An equivalent fraction (31/2) 	c. An equivalent decimal (15.5) 

Directions:

Today you will be taking the Ohio Grade 7 Mathematics Practice Assessment.

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 in your Answer Document.

2. Use only a #2 pencil to answer questions on this test.

3. For questions with bubbled responses, choose the correct answer and then fill in the circle with the appropriate letter in your Answer Document. Make sure the number of the question in this Student Test Booklet matches the number in your Answer Document. 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.

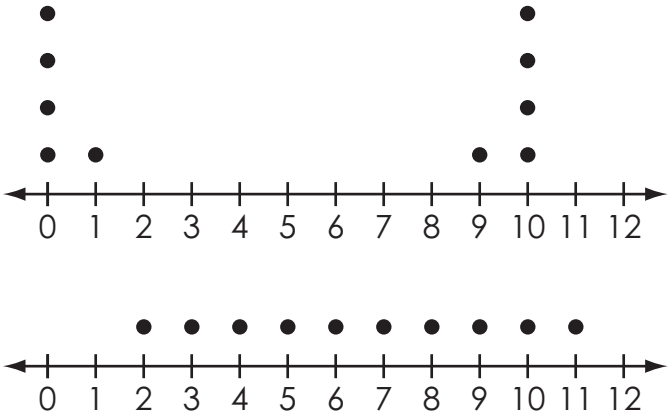
4. For questions with response boxes, write your answer neatly, clearly and only in the space provided in your Answer Document. Any responses written in your Student Test Booklet will not be scored. Make sure the number of the question in this Student Test Booklet matches the number in your Answer Document.

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 and Answer Document.

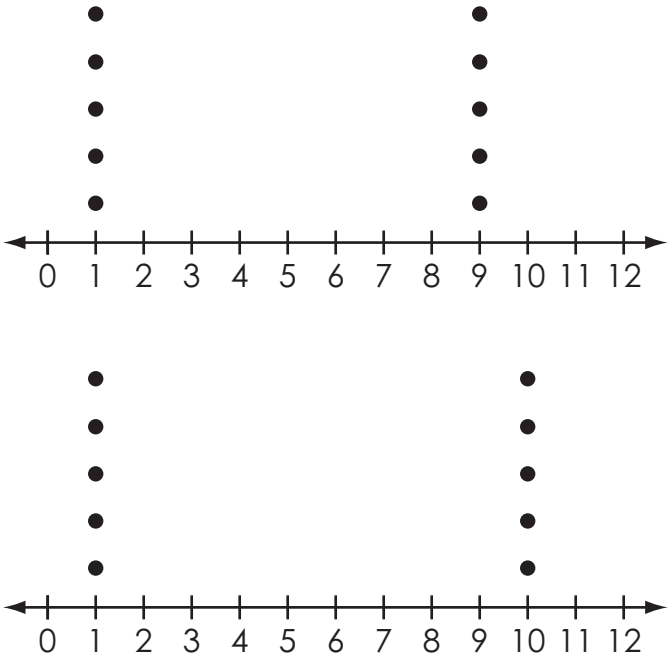
6. Check over your work when you are finished.

1. Which two data sets show the most overlap?

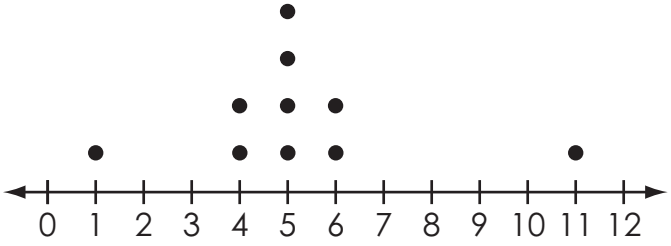
A.

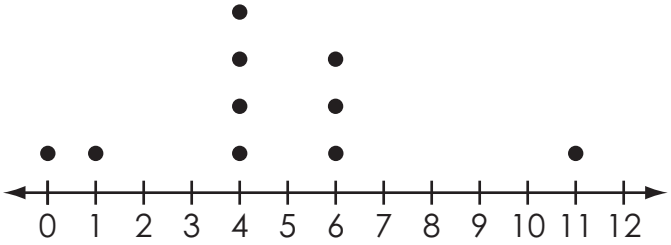


B.

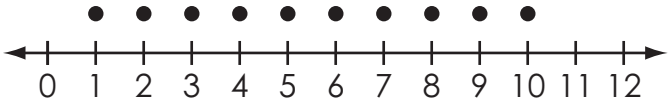


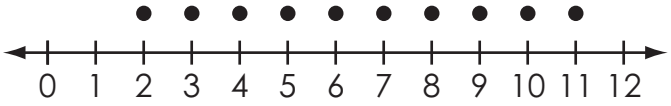
C.


0 1 2 3 4 5 6 7 8 9 10 11 12


0 1 2 3 4 5 6 7 8 9 10 11 12

D.


0 1 2 3 4 5 6 7 8 9 10 11 12


0 1 2 3 4 5 6 7 8 9 10 11 12

2. A triangle has a side length of $\frac{3}{4}$ inch and a side length of 3 inches.

   What could be the length, in inches, of the third side of the triangle?

   Complete the response grid in the **Answer Document**.

3.

This item cannot be rendered as a paper/pencil item.

4.

This item cannot be rendered as a paper/pencil item.

5. Mr. Larkin grouped the students in his class into 4 groups of equal size, labeled Red, Blue, Green, and Yellow. Each day, Mr. Larkin selects one group at random to read aloud during class. The groups selected each day for 8 days are shown.

Day	Selected Group
1	Green Group
2	Blue Group
3	Green Group
4	Blue Group
5	Red Group
6	Blue Group
7	Blue Group
8	Blue Group

Which group's observed frequency of being selected is closest to its expected frequency?

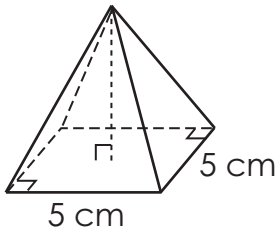
A. Red Group

B. Blue Group

C. Green Group

D. Yellow Group

6. A three-dimensional figure is shown.



In the **Answer Document**, select all of the shapes of the cross sections that could result from slicing the figure as described in the table.

	Square	Triangle	Trapezoid
Parallel to the base	A	B	C
Perpendicular to the base through the apex	D	E	F
Perpendicular to the base, not through the apex	G	H	I

7. The relationship between the number of cups of water, *w*, and the number of cups of lemon juice, *j*, used in a recipe is described by the equation shown.

   $j = 2w$

   How many cups of water are needed for each cup of lemon juice?

   Complete the response grid in the **Answer Document**.

8.

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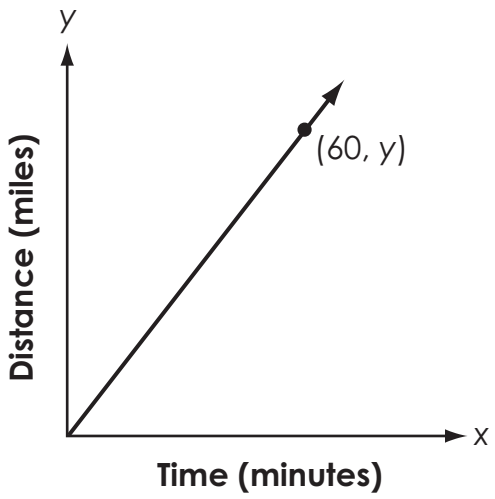
9.

This item cannot be rendered as a paper/pencil item.

10. The graph shown models the relationship between the distance a car travels and time.



What does the point (60, *y*) represent in this situation?

A. The car travels for *y* minutes.

B. The car travels *y* miles per hour.

C. The car travels 60 miles per hour.

D. The car travels 60 miles every *y* minutes.

11. A box contains red markers, blue markers, and green markers. There are more blue markers than red markers. The probability of randomly selecting a blue marker from the box is $\frac{1}{5}$.

    What is a possible probability that a randomly selected marker from the box is red?

    Complete the response grid in the **Answer Document**.

12. An inequality is given, where r is a positive rational number.

    $r \cdot \frac{q}{r} < 0$

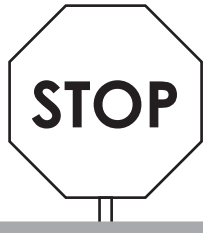
    Which inequality must also be true?

    A. $q < 0$

    B. $q > 0$

    C. $q < -r$

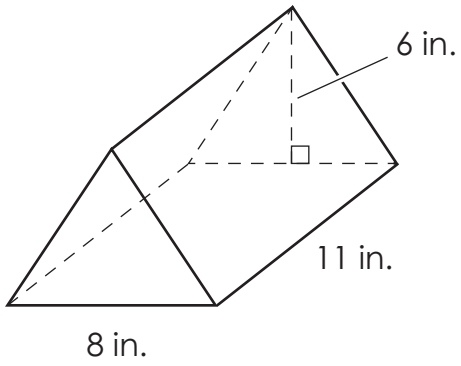
    D. $\frac{q}{r} < -r$



Do not go on

Do not go on

1. A right triangular prism is shown.



What is the volume, in cubic inches, of the prism?

Complete the response grid in the **Answer Document**.

2. Abdul has an original recipe for a fruit drink with apple, orange, and pineapple juice. He makes new fruit drinks by mixing different quantities of the three juices. The table shows the amount of each juice in the recipe and in each drink.

Drink	Cups of Apple Juice	Cups of Orange Juice	Cups of Pineapple Juice
Original Recipe	$1\frac{1}{4}$	$1\frac{3}{4}$	$\frac{1}{2}$
1	$1\frac{2}{3}$	$2\frac{1}{3}$	$\frac{2}{3}$
2	$2\frac{1}{2}$	$3\frac{1}{2}$	1
3	5	7	1
4	$1\frac{1}{3}$	$2\frac{3}{4}$	$\frac{1}{3}$
5	$1\frac{7}{8}$	$2\frac{5}{8}$	$\frac{6}{8}$

In the **Answer Document**, select all the drinks that have the same proportion of juices as Abdul's original recipe.

A. Drink 1

B. Drink 2

C. Drink 3

D. Drink 4

E. Drink 5

3. A pizza shop wants to determine how often it delivers to three different areas of a city. The table shows the areas from a random sample of 80 deliveries.

Area of City	Number of Deliveries
Northern	14
Central	44
Southern	22

Based on these data, if the driver makes 200 deliveries, how many deliveries will be to the southern area of the city?

Complete the response grid in the **Answer Document**.

4.

This item cannot be rendered as a paper/pencil item.

5. A snail moves $\frac{1}{50}$ of a mile in $\frac{5}{6}$ of an hour.

If the snail continues at this pace, how far, in miles, does it move in one hour?

Complete the response grid in the **Answer Document**.

6. In the **Answer Document**, select the three expressions that are equivalent to $-2(4 - 3x) + (5x - 2)$.

   A. $2x - 10$

   B. $11x - 10$

   C. $-8 + 11x - 2$

   D. $-8 - 11x - 2$

   E. $-8 + 6x + 5x - 2$

   F. $-8 - 3x + 5x - 2$

7. A circle has a diameter of 7.2 inches.

   What is the circumference of the circle, rounded to the nearest tenth of an inch?

   Complete the response grid in the **Answer Document**.

8. A fair coin is flipped 3 times.

   What is the probability that the coin lands heads up once and lands tails up twice if order does not matter?

   A. $\frac{1}{8}$

   B. $\frac{1}{4}$

   C. $\frac{3}{8}$

   D. $\frac{5}{8}$

9.

This item cannot be rendered as a paper/pencil item.

10. Ben has a coupon for an additional 15% off the sale price of any item in a store. He uses his coupon to buy a shirt whose sale price is already 20% off the original price. He pays $14.96, and there is no sales tax.

    What is the original price of the shirt?

    Complete the response grid in the **Answer Document**.

11. Arianne drives by a stop light near her home once every morning. The stop light has red, yellow, and green lights. She wants to know the probability of the light being red on two mornings.

    Which list represents the sample space for two mornings at the stop light?

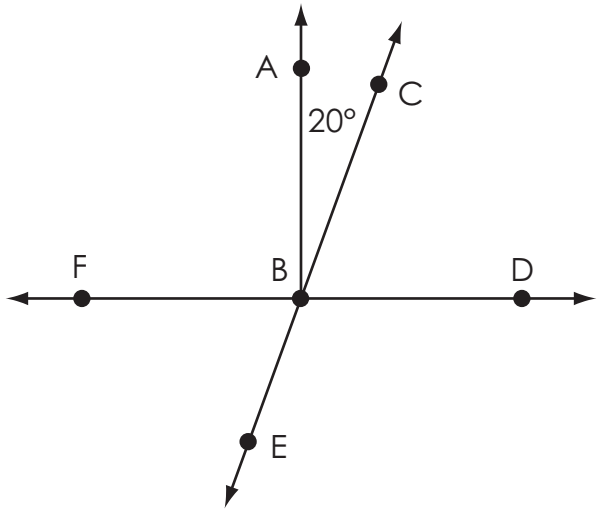
    A. red, yellow, green

    B. red/red, yellow/yellow, green/green

    C. red/yellow, red/green, yellow/green, yellow/red, green/yellow, green/red

    D. red/red, red/yellow, red/green, yellow/red, yellow/yellow, yellow/green, green/red, green/yellow, green/green

12. A figure is shown, where lines CE and FD intersect at point B.



Angle ABC is complementary to angle DBC.

What is the measure, in degrees, of ∠EBF?

Complete the response grid in the **Answer Document**.

13.

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14.

This item cannot be rendered as a paper/pencil item.