



## **Message from Donna Watts, Coordinator for Mathematics**

- The public release items in each grade DO NOT represent the blueprint of the test. You are seeing real items but only a subset of what a student would actually experience on the test itself.
- The PDF may LOOK like an actual test, however, it only contains LESS THAN 20 ITEMS in any grade, which is SIGNIFICANTLY LESS than the number of items a student actually answers to determine his/her score.
- While these items were used with students, remember objectives can and WILL be assessed in a variety of ways. With this released item, you are seeing only ONE way to assess that objective.
- We are planning to add answers, student responses and annotations of student responses along with a link between the objective and the item. As that information is reviewed, it will also be uploaded.

**Continue to page 2 MSA Public Release Items →**



# MSA

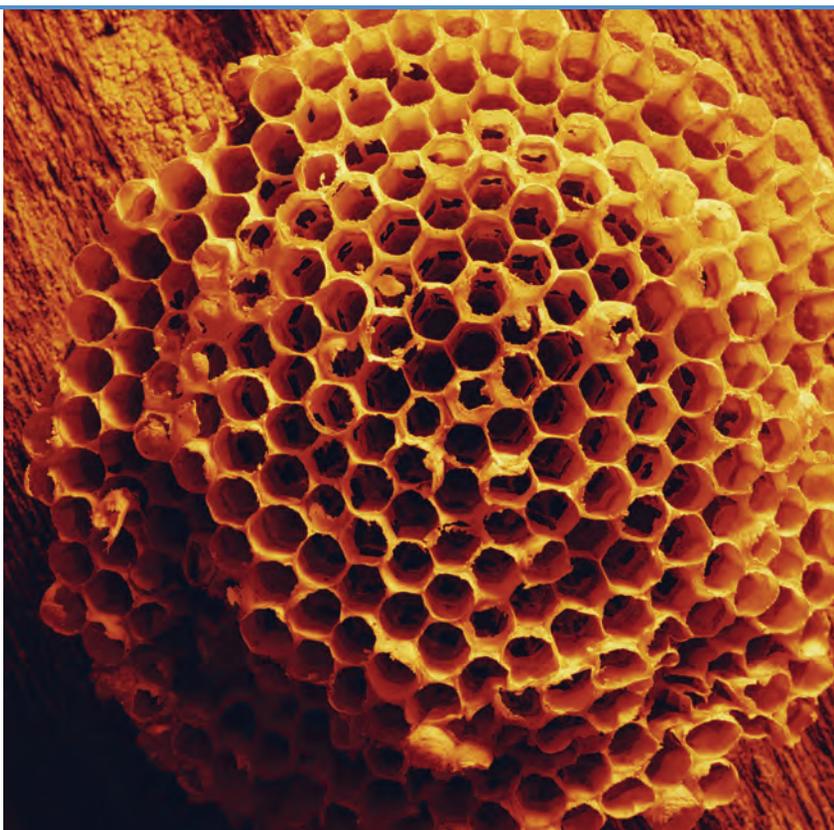
MARYLAND SCHOOL ASSESSMENT

# MATHEMATICS PUBLIC RELEASE

Release Date: March 2009

GRADE

# 6



PEARSON





For selected-response questions, you may use the space inside the boxed area or scratch paper for notes and calculations. Be sure to fill in the bubble with your answer.

For constructed-response questions, you may use the space inside the boxed area or scratch paper for notes and calculations. Write your answers on the lines provided. You do not need to use the entire answer space. If you use scratch paper, remember: only what is written inside the boxed area will be scored.

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1

Paula used the following rule to make this function table.

multiply  $x$  by 2 and then subtract 4

$x$	6	8	18	20
$y$	8	12	32	?

What is the value of  $y$  when  $x = 20$ ?

- (A) 36
- (B) 44
- (C) 52
- (D) 60



2

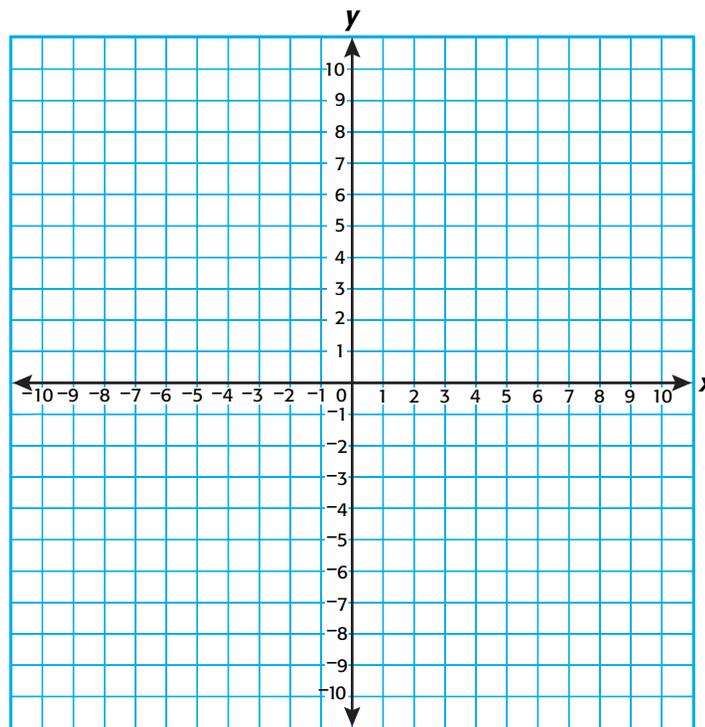
Jae made a map of her classroom using a coordinate plane. This table shows the ordered pairs that represent the locations of three students' desks.

**CLASSROOM MAP**

Student	Location of Desk
Jae	(0, 1)
Max	(-6, 1)
Adela	(-1, -4)

**Step A**

On the coordinate plane, plot the ordered pairs that represent the locations of the three students' desks.





**Step B**

- Explain why the points you plotted are correct. Use what you know about ordered pairs in your explanation. Use words, numbers, and/or symbols in your explanation.
- Jae wants to add the location of Dallen’s desk to her map. Dallen’s desk should be plotted at  $(-4, -4)$ . Jae thinks that if she connects the points she will form a square. Explain whether Jae is correct or incorrect. Use what you know about ordered pairs and geometric shapes in your explanation. Use words, numbers, and/or symbols in your explanation.

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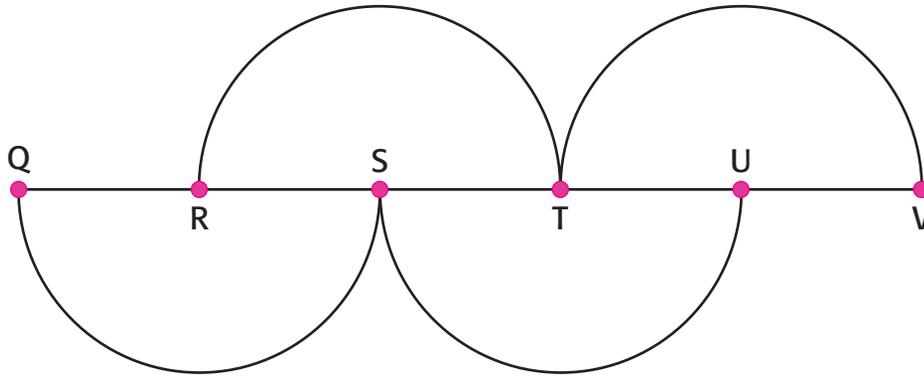
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3

Look at these congruent semi-circles.



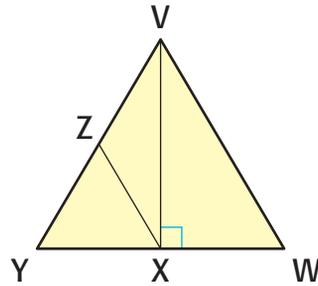
Which of these line segments represents a diameter of one of the semi-circles?

- (A)  $\overline{RU}$
- (B)  $\overline{RV}$
- (C)  $\overline{ST}$
- (D)  $\overline{SU}$



4

Look at this figure.



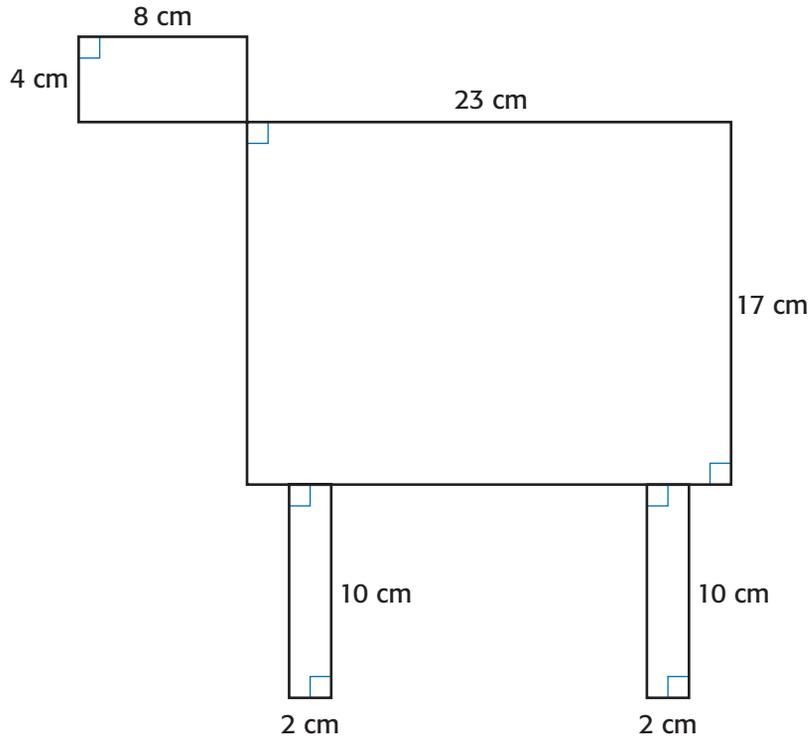
What triangle in this figure is obtuse?

- (A) triangle VWX
- (B) triangle VWY
- (C) triangle VXZ
- (D) triangle VXY



5

Look at this figure.



What is the total area of this figure?

- (A) 72 square centimeters
- (B) 76 square centimeters
- (C) 391 square centimeters
- (D) 463 square centimeters



6

Look at this rectangular sheet of wrapping paper.



The perimeter of the wrapping paper is 200 inches.

What is the length ( $L$ ) of this sheet of wrapping paper?

- (A) 37 inches
- (B) 64 inches
- (C) 72 inches
- (D) 128 inches



7

Mr. Logan made this frequency table to organize his students' test scores.

TEST SCORES

Score	Frequency
90–100	16
80–89	9
70–79	2
60–69	2

Mr. Logan wants to add these test scores to his frequency table.

95 65 80 75 100 65

Which frequency table displays all of Mr. Logan's test score data?

TEST SCORES

Score	Frequency
90–100	19
80–89	11
70–79	4
60–69	3

(A)

TEST SCORES

Score	Frequency
90–100	18
80–89	10
70–79	3
60–69	4

(C)

TEST SCORES

Score	Frequency
90–100	17
80–89	10
70–79	3
60–69	3

(B)

TEST SCORES

Score	Frequency
90–100	18
80–89	9
70–79	3
60–69	2

(D)



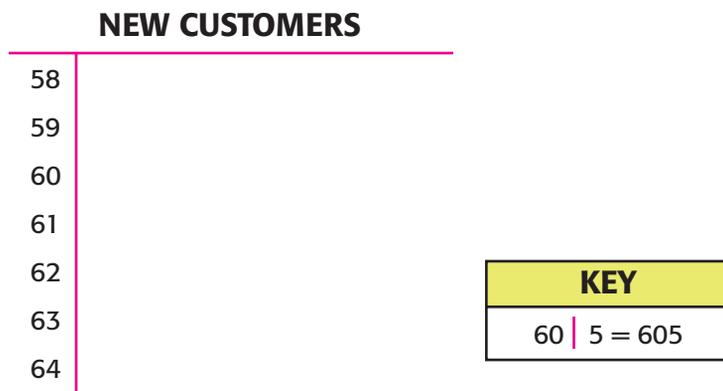
8

A publishing company recorded the number of new customers for 15 of their magazines, as shown below.

587	605	617	585	599
630	591	637	580	619
646	598	602	600	599

**Step A**

Complete the stem-and-leaf plot for the data.



**Step B**

The publishing company added a 16th magazine to this list. The number of new customers for that magazine is 664. Explain how this changes the stem-and-leaf plot that you completed. Use what you know about stem-and-leaf plots in your explanation. Use words, data, and/or symbols in your explanation.

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9

Elise's backpack contains 2 red pens, 3 blue pens, and 5 black pens. She will take 1 pen out of her backpack without looking.

What is the probability that the pen Elise takes out of her backpack is red?

- (A) 0.10
- (B) 0.20
- (C) 0.25
- (D) 0.50



10

Which integer is greater than  $-32$  and less than  $-17$ ?

- (A)  $-40$
- (B)  $-35$
- (C)  $-20$
- (D)  $-15$





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11

Taylor divided a spinner into four equal sections. He labeled each section with the name of an animal. This table shows the results of Taylor spinning the arrow 25 times.

**TAYLOR'S SPINNER**

Animal	Number of Spins
Elephant	7
Lion	4
Tiger	5
Zebra	9

Based on the data in the table, what is the probability that on Taylor's next spin the arrow will land on the zebra section?

- (A) 25%
- (B) 36%
- (C) 64%
- (D) 90%



12

What is 27% written as a ratio?

- (A) 27:1,000
- (B) 27:100
- (C) 27:10
- (D) 27:1





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