



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.

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MSA

MARYLAND SCHOOL ASSESSMENT

MATHEMATICS PUBLIC RELEASE

Release Date: March 2009

GRADE

8



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.

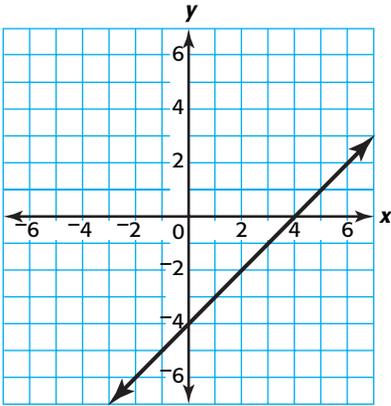
For constructed-response questions, you may use the space inside the boxed area or scratch paper for notes and calculations. Write your answers on the lines provided. You do not need to use the entire answer space. If you use scratch paper, remember: only what is written inside the boxed area will be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

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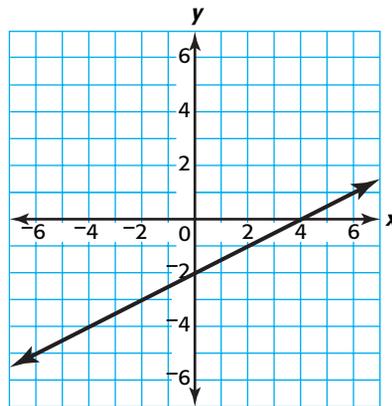


1

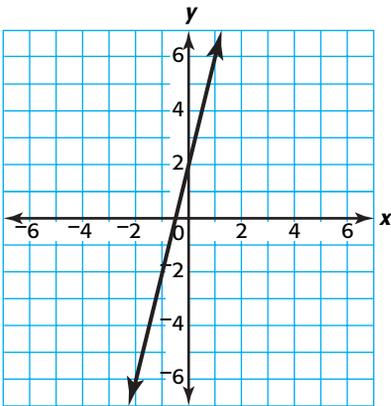
Which coordinate plane represents the linear relationship $y = 2x + 4$?



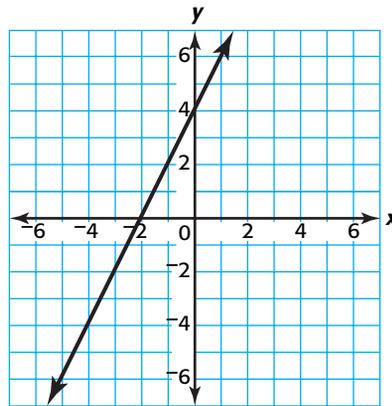
(A)



(C)



(B)



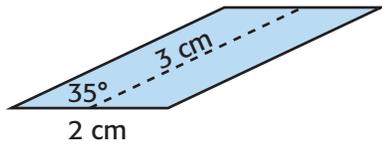
(D)



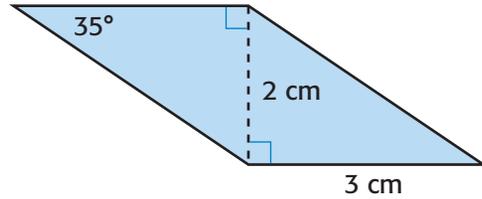
2

A parallelogram has a side length of 3 centimeters, a height of 2 centimeters, and an angle measure of 35° .

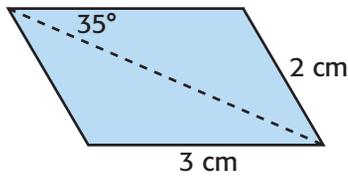
Which quadrilateral represents this parallelogram?



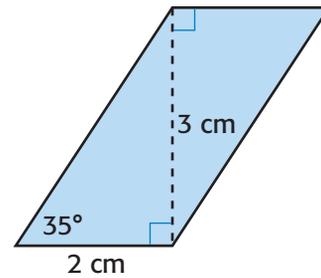
(A)



(C)



(B)



(D)



3

The diameter of a circular pizza is 16 inches.

Step A

What is the area of this pizza? Use 3.14 for π .

_____ square inches

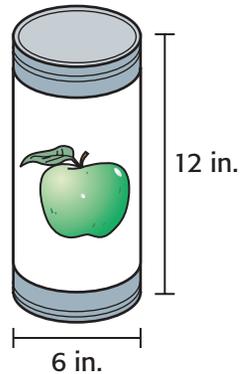
Step B

- Use what you know about the area of circles to explain how you determined the area of this pizza. Use words, numbers, and/or symbols in your explanation.
- The owner of the pizza shop says the circular pizza has a greater area than a square pizza with 16-inch sides. Use what you know about the areas of circles and squares to justify whether or not the owner's statement is correct. Use words, numbers, and/or symbols in your justification.



4

The dimensions of a cylindrical apple juice can are shown.



The given formula can be used to determine the volume (V) of a cylinder.

$$V = Bh = \text{area of base} \times \text{height}$$

What is the approximate volume of the can? Use 3.14 for π .

- (A) 113 cubic inches
- (B) 339 cubic inches
- (C) 1,064 cubic inches
- (D) 1,356 cubic inches



5

Weverton Cliffs is a hiking trail in Maryland. This trail is 3 inches long on a map that has a scale of $7\frac{1}{2}$ inches = 15 miles.

If Sarah hikes Weverton Cliffs from beginning to end and returns along the same trail, what is the total distance she hikes?

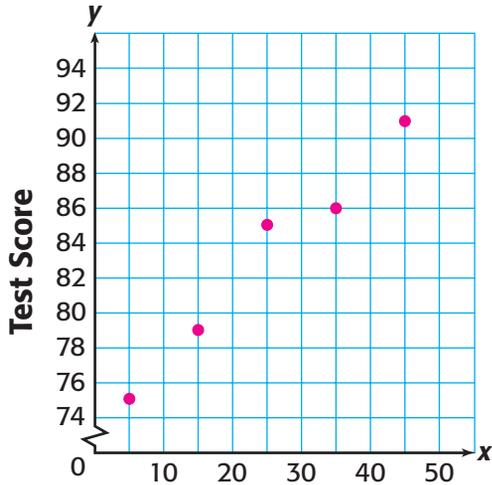
- (A) 3 miles
- (B) 6 miles
- (C) 12 miles
- (D) 18 miles



6

Which scatter plot shows a positive relationship between the number of homework questions a student completes and the student's test scores?

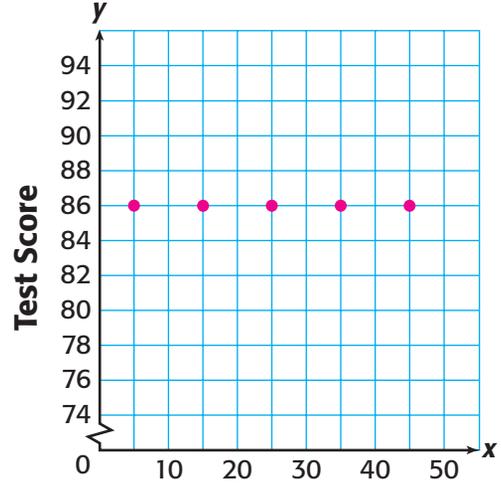
HOMework AND TEST SCORES



Number of Homework Questions

(A)

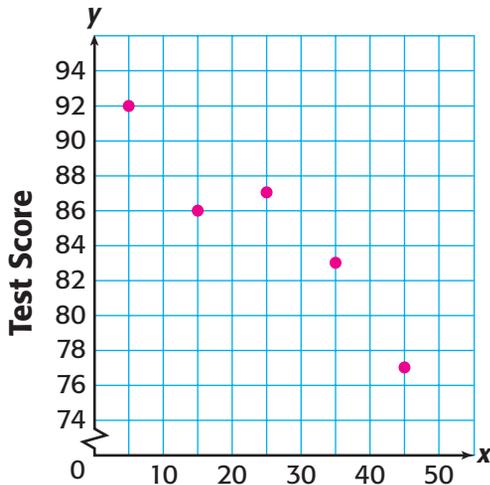
HOMework AND TEST SCORES



Number of Homework Questions

(C)

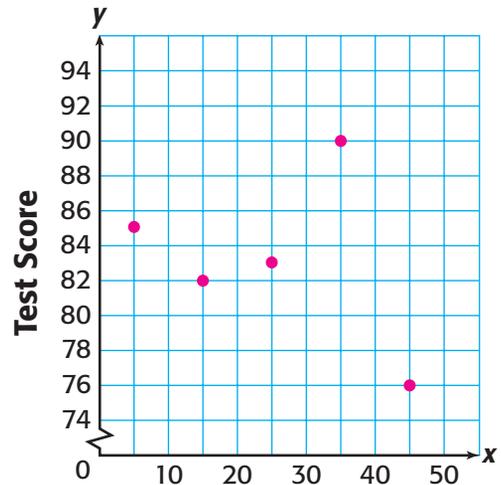
HOMework AND TEST SCORES



Number of Homework Questions

(B)

HOMework AND TEST SCORES



Number of Homework Questions

(D)



7

Nina has a bag with 60 pieces of candy. The bag contains 25 red pieces, 11 blue pieces, and 9 green pieces. The remaining pieces are yellow. Nina will randomly pick one piece of candy from the bag.

What is the probability this piece will be yellow?

/	/	/		
.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9





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8

Look at this sequence.

$-90, -83, -76, -69, \underline{\quad}, \underline{\quad}, \underline{\quad}, \underline{\quad}, \underline{\quad}, \underline{\quad}, -20, \dots$

What is the ninth term in the sequence?

- (A) -62
- (B) -34
- (C) -27
- (D) -13



9

Look at this expression.

$$\frac{1}{4}(a) + \frac{1}{2}(b) + \frac{2}{5}(b) + \frac{3}{10}(a)$$

Step A

Simplify the expression.

Step B

Use what you know about simplifying algebraic expressions to explain how you determined your answer. Use words, numbers, and/or symbols in your explanation.



10

Sondra's candy jar contains 6 peppermint candies, 3 spearmint candies, and 3 wintergreen candies. The first candy Sondra randomly picks from the jar is wintergreen. It is not replaced.

What is the probability the second candy she randomly picks from the jar will also be wintergreen?

$$\frac{1}{12}$$

(A)

$$\frac{2}{12}$$

(B)

$$\frac{1}{11}$$

(C)

$$\frac{2}{11}$$

(D)



11

The radius of Earth is approximately 6.37×10^6 meters.

Which number is equivalent to 6.37×10^6 ?

- (A) 637,000
- (B) 6,370,000
- (C) 63,700,000
- (D) 637,000,000



12

Which estimate is closest to the square root of 50?

- (A) 5
- (B) 6
- (C) 7
- (D) 8





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