Name_____ Session 1 2 3 (Circle one) Date_____

DD9

1.

Hoaung went to a doughnut shop where jelly-filled doughnuts cost $0.50 including tax and glazed doughnuts cost $0.30 including tax. If Hoaung has $2 to spend and wants to purchase at least one of each of these two kinds of doughnuts, which of the following does not represent a reasonable combination of doughnuts that he could purchase?

A 2 jelly-filled doughnuts and 2 glazed doughnuts

B 2 jelly-filled doughnuts and 3 glazed doughnuts

C 3 jelly-filled doughnuts and 2 glazed doughnuts

D 1 jelly-filled doughnut and 5 glazed doughnuts

2.

If $\overline{JM}$ is a base and $\overline{LM}$ is a side of isosceles trapezoid $JKLM$, then which statement must be true?

A $\overline{JM}$ and $\overline{KL}$ are parallel.

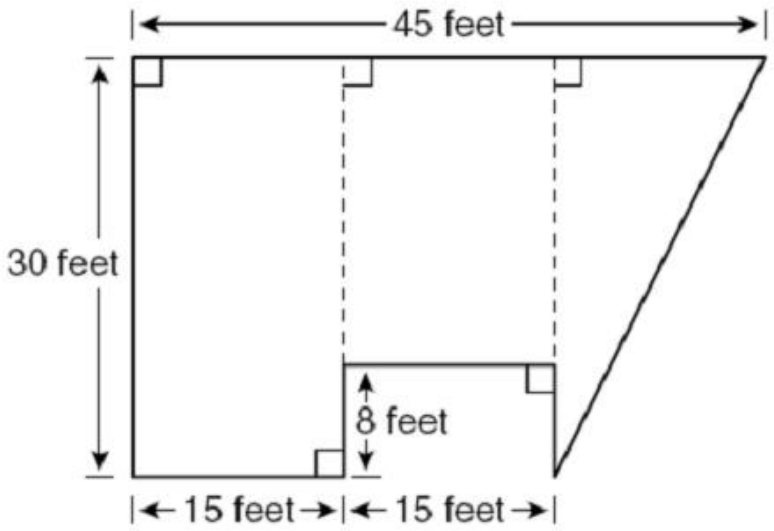
B $\overline{LM}$ and $\overline{JK}$ are parallel.

C $\overline{JM}$ and $\overline{KL}$ are perpendicular.

D $\overline{LM}$ and $\overline{JM}$ are perpendicular.

3.

Linda has divided her garden into 3 parts, as shown below.



What is the area of her garden?

A $1005\ ft^2$

B $1230\ ft^2$

C $1350\ ft^2$

D $1470\ ft^2$

4.

A school district held a meeting for all its physical education teachers. The number of women was 5 more than twice the number of men attending. A total of 53 teachers attended the meet Which system of equations could be used to find w, the number of women, and m, the number at this meeting?

A $m = 2w + 5$
$w + m = 53$

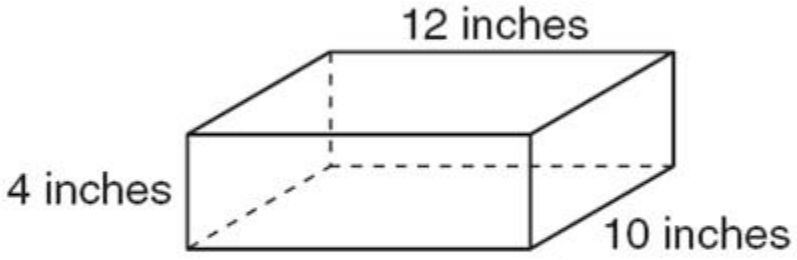
B $2w + m = 5$
$w + m = 53$

C $w = m + 5$
$w + m = 53$

D $w = 2m + 5$
$w + m = 53$

5.

What is the volume of a similar rectangular box with dimensions that are 3.5 times larger than the dimensions of the rectangular box shown below?



F $5{,}880 \text{ in.}^3$

G $17{,}836 \text{ in.}^3$

H $20{,}580 \text{ in.}^3$

J $1{,}680 \text{ in.}^3$

6.

The wheels on Lee's bike each have a circumference of approximately 7 feet. Which of the following equations could be used to determine y, the total distance traveled in feet for each wheel as a function of x, the number of wheel revolutions?

F $y = \frac{7}{x}$

G $y = 7 + x$

H $y = 7x$

J $y = 7 - x$

7.

Which of the following sets does not represent a function?

F $\{(-1, -1), (1, 1), (2, 2), (3, 3), (4, 4)\}$

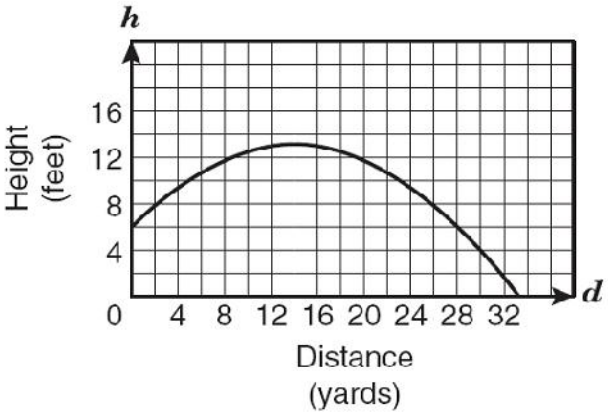
G $\{(-1, 0), (0, 2), (1, 4), (2, 6), (3, 8)\}$

H $\{(-1, 2), (1, 1), (1, -1), (2, 1), (4, 2)\}$

J $\{(-2, 4), (-1, 1), (1, 1), (2, 4), (3, 9)\}$

8.

The graph represents the relationship between the height of a ball and the distance it traveled after the ball was thrown.



What conclusion can be drawn from the graph about this relationship?

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A The ball reached a maximum height of about 16 feet after traveling a horizontal distance of approximately 33 yards.

B The ball reached a maximum height of about 13 feet after traveling a horizontal distance of approximately 14 yards.

C The ball was thrown from a height of approximately 6 feet above the ground and traveled a horizontal distance of approximately 20 yards before it reached its maximum height.

D The ball was thrown from a height of approximately 7 feet above the ground and traveled a horizontal distance of approximately 10 yards before it reached its maximum height.

9.

What is the slope of the function $-6x - 2y = 8$?

F $\frac{1}{3}$

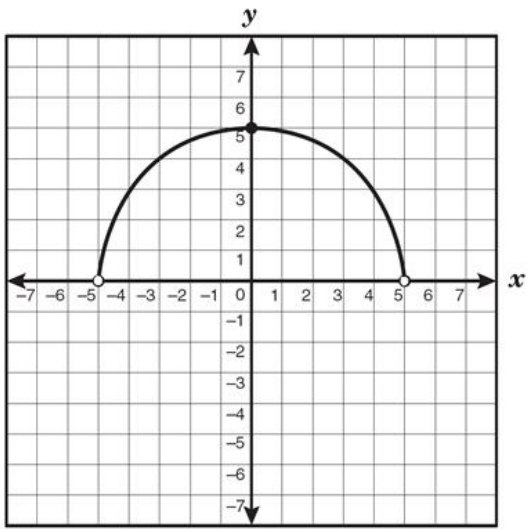
G -3

H -4

J 3

10.

The graph of the function $y = \sqrt{25 - x^2}$ is shown on the coordinate grid below.



What is the range of the function?

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A. $-5 < y < 5$

B. $0 \leq y < 5$

C. $-5 \leq y \leq 5$

D. $0 < y \leq 5$