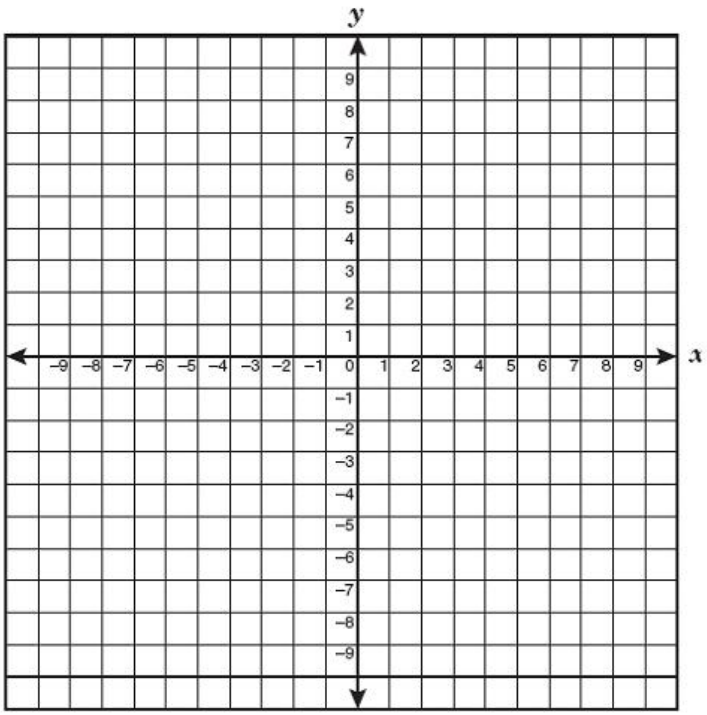
Name_____ Session 1 2 3 (Circle one) Date_____

DD8

1.

Use the grid to graph $y \geq \frac{3}{4}x - 2$.



Which coordinate point represents a solution of this inequality?

A $(4, 0)$

B $(-3, -5)$

C $(7, 2)$

D $(-2, 3)$

2.

Which equation describes the line passing through the points $(3, 0)$ and $(0, 4)$?

F $y = 3x + 4$

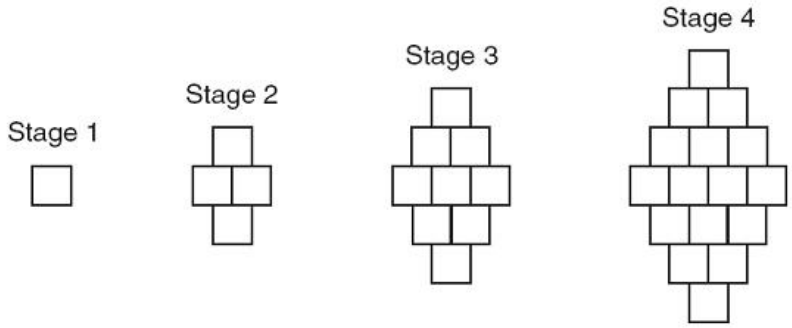
G $x = 4y + 3$

H $3x + 4y = 12$

J $4x + 3y = 12$

3.

The blocks below are arranged in sequence to show a pattern.



Which expression can be used to determine the number of blocks at Stage n?

F $\sqrt{n}$

G $(n-1)+1$

H $2n$

J n^2

4.

The midpoint of $\overline{AB}$ is M. If the coordinates of M are $(\frac{1}{2}, -2)$ and the coordinates of B are $(6, 1)$, what are the coordinates of A?

A $(-5, -5)$

B $(2, -10)$

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

D $(-5, 5)$

5.

Which of the following is equivalent to $2x - 3y \geq 9$?

F $y \geq \frac{3}{2}x + 3$

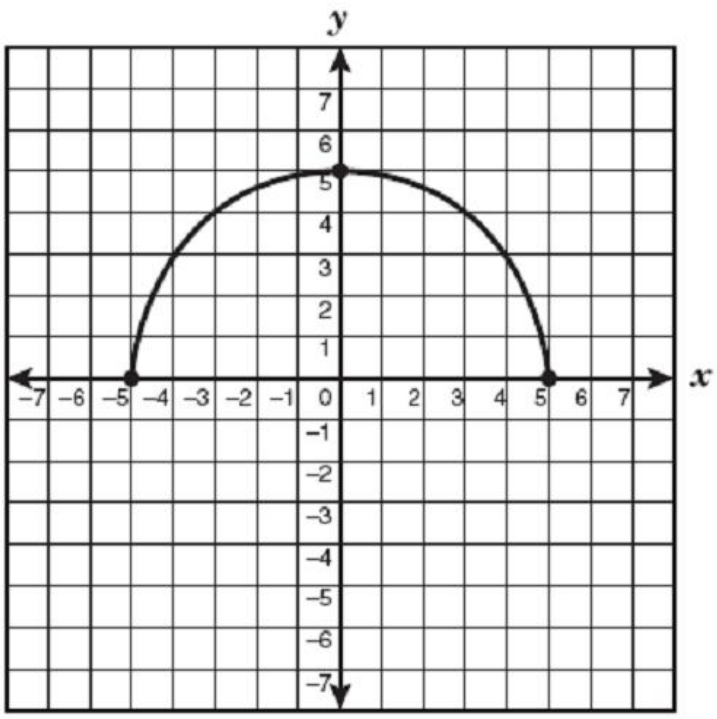
G $y \leq \frac{2}{3}x - 3$

H $y \geq \frac{2}{3}x - 3$

J $y \leq \frac{3}{2}x + 3$

6.

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



What is the domain of the function?

F $x \leq 5$

G $x \geq -5$

H $-5 \leq x \leq 5$

J $0 \leq x \leq 5$

7.

A manufacturing company that makes semiconductors produced about 500 wafers of gallium nitride. The company found that 60 of the wafers contained defects and could not be used. Based on this information, which is the best prediction of the number of defective wafers produced when this company manufactures 8000 wafers?

A 133

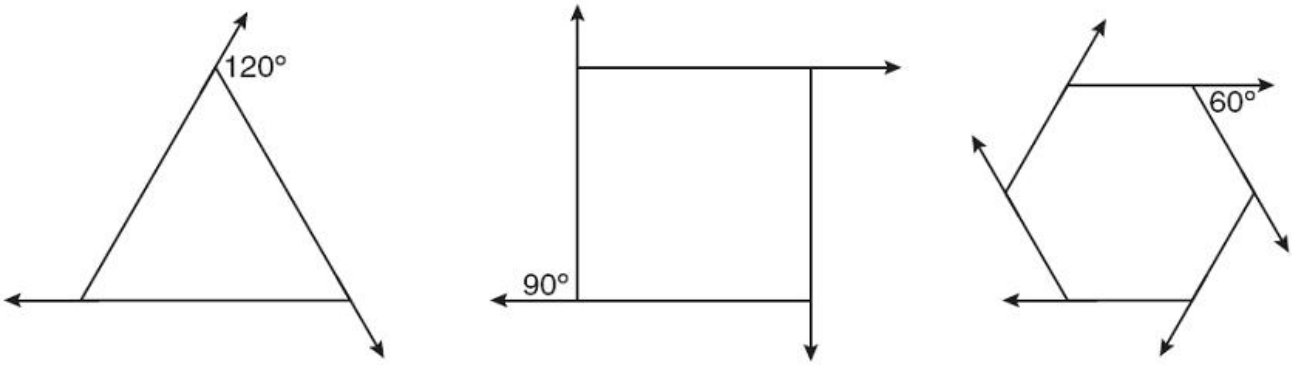
B 500

C 960

D 367

8.

The measure of an exterior angle is shown for each of 3 regular polygons below.



Which expression best represents the measure in degrees of an exterior angle of a regular polygon with n sides?

A $30(n + 1)$

B $\frac{360}{(n-2)n}$

C $30(n - 1)$

D $\frac{360}{n}$

9.

Winners from the math club's fund-raiser randomly select a gift certificate from Box A and from Box B. The contents of each box are shown below.

Box A	Box B
5 dinner certificates	4 CD certificates
4 DVD certificates	3 camera certificates
3 movie certificates	5 amusement park certificates
5 T-shirt certificates	5 television certificates

What is the probability that the first winner will randomly select a DVD certificate and an amusement park certificate?

A $\frac{20}{289}$

B $\frac{9}{17}$

C $\frac{9}{289}$

D $\frac{1}{19}$

10.

Which table identifies points on the line defined by the equation $y - 5x = -9$?

A

x	y
−5	−34
−2	−19
1	−9
2	11
7	26

C

x	y
−4	−29
−1	−14
1	−4
3	6
6	21

B

x	y
−6	−39
−5	−34
1	−14
4	10
7	24

D

x	y
−7	−44
−3	−23
0	9
4	13
6	21