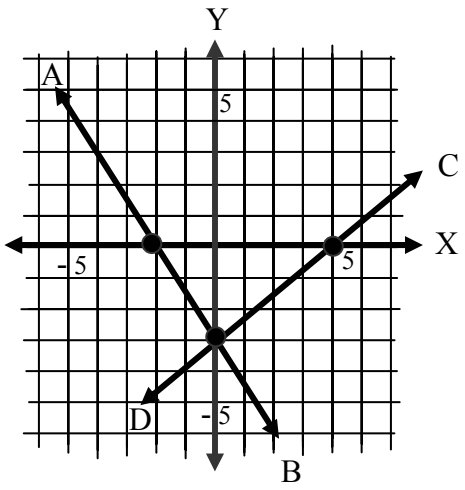
Math 0090 Lab Worksheet #7

Objective: Solve problems #1 - #10 involving linear equations and their graphs.
#11 through #15 are review problems.

Use the diagram below to answer the questions that follow.



1. Which of the following equations represents line AB on the graph above?

   A. $3x + 2y = -6$
   B. $3x - 2y = -6$
   C. $2x + 3y = -6$
   D. $2x + 3y = 6$

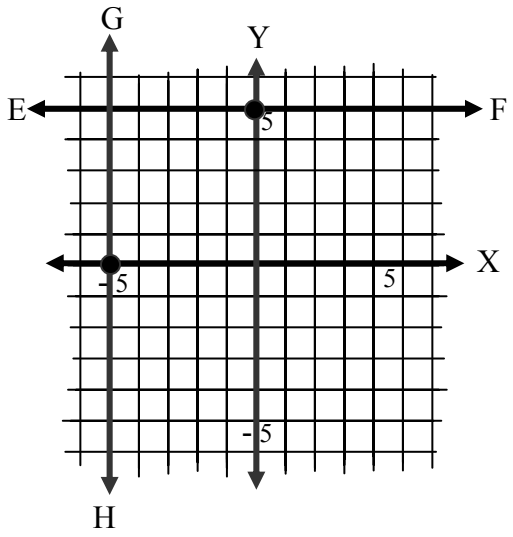
2. What are the coordinates of the y-intercept of the line CD on the graph above?

   A. $(-3, 0)$
   B. $(0, -3)$
   C. $(0, 5)$
   D. $(5, 0)$

3. Which of the following equations represents line CD on the graph above?

   A. $y = -\frac{4}{3}x - 3$
   B. $y = -\frac{3}{4}x - 3$
   C. $y = \frac{3}{4}x - 3$
   D. $y = \frac{3}{4}x + 3$

Use the diagram below to answer the questions that follow.



4. Which of the following equations represents line EF on the graph above?

A. $x + 5y = 0$
B. $x = -5$
C. $5y = 0$
D. $y = 5$

5. Which of the following equations represents line GH on the graph above?

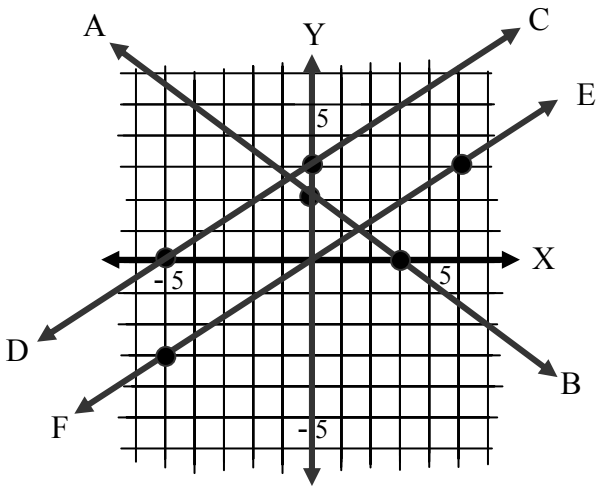
A. $-5x + y = 0$
B. $x + 5 = 0$
C. $-5x = 0$
D. $y = -5x$

6. The slope of line EF is

A. 0
B. $\frac{1}{5}$
C. 5
D. Undefined

7. The slope of line GH is
A. 0
B. -5
C. 5
D. Undefined

Use the diagram below to answer the questions that follow.



8. Which of the following equations represents line AB on the graph above?

A. $3x - 2y = 0$
B. $2x - 3y = 6$
C. $3x + 2y = 0$
D. $2x + 3y = 6$

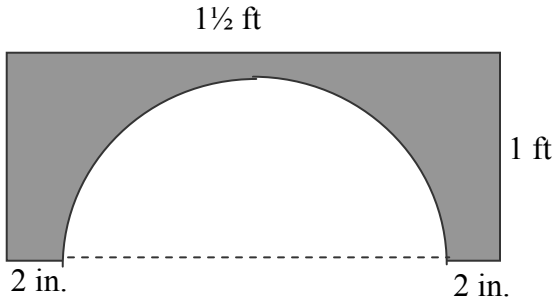
9. Which of the following equations represents line CD on the graph above?

A. $3x - 5y = 0$
B. $5x - 3y = 0$
C. $3x - 5y = -15$
D. $5x + 3y = -15$

10. Which of the following equations represents line EF on the graph above?

A. $3x - 5y = 0$
B. $5x - 3y = 0$
C. $3x - 5y = -15$
D. $5x + 3y = -15$

11. Use the diagram below to answer the question that follows.



Find the area of the shaded region.

A. $216 - 49\pi$ in^2

B. $216 - 24.5\pi$ in^2

C. 191.5π in^2

D. 240.5π in^2

12. Which of the following is a factor of $16x^2 - 24x + 9$?

A. $(16x - 9)$

B. $(16x - 3)$

C. $(4x - 3)$

D. $(4x - 1)$

13. The quotient, of a number x decreased by four, and three, is the same as the number x increased by seven. Which equation correctly expresses this relationship?

A. $\dfrac{x-4}{3} = 7x$

B. $\dfrac{x-4}{3} = x + 7$

C. $\dfrac{x}{4} + 3 = 7x$

D. $\dfrac{x}{4} + 3 = x + 7$

14. Simplify the following expression:

$$\frac{6x^2+18x+12}{3x+6}$$

A. $2(x+1)$
B. $5x+12$
C. $2(x^2+3x+1)$
D. $2(x+9x+1)$

15. Use the diagram below to answer the question that follows.

The diagram above represents a racetrack. The ends are semicircular. What is the approximate distance in yards a runner runs to complete 8 laps around the track?

A. 294 yds
B. 354 yds
C. 2352 yds
D. 2834 yds