

King Fahd University of Petroleum and Minerals

Prep-Year Math Program

Math 002 - Term 132

Recitation (9.1)

**Question 1:**

If  $(a,b)$  is the solution of system of equation 
$$\begin{cases} 3\sqrt{2}x - 4\sqrt{3}y = -6 \\ 2\sqrt{2}x + 3\sqrt{3}y = 13 \end{cases},$$

then  $a \cdot b$  is equal to

- A)  $\sqrt{6}$       B)  $-6$       C)  $\sqrt{5}$       D)  $-\sqrt{6}$       E)  $6$

**Answer:**  $\sqrt{6}$

**Question 2:**

The lines whose equations are  $2x + 3y = 1$ ,  $3x - 4y = 10$  and  $4x + ky = 5$  all intersect at the same point. What is the value of  $k$  ?

**Answer:**  $k = 3$

**Question 3**

If  $(2, -1)$  is a solution of the linear system 
$$\begin{cases} ax - by = 12 \\ bx + ay = -1 \end{cases},$$
 then  $a + b =$

- A) 7      B) 8      C) 6      D) 9      E) 4

**Answer:** A) 7

**Question 4**

If the linear system 
$$\begin{cases} \frac{3}{4}x + \frac{k}{3}y = 2 \\ \frac{1}{2}x + \frac{2}{9}y = \frac{4}{3} \end{cases}$$
 is dependent system, then the value of  $k$

is

- A) 1      B) 5      C) 4      D) 2      E) 3

**Answer:** A) 1

**Question 5:** If  $(x, y)$  is the solution of the system 
$$\begin{cases} y = \log(x+1)+3 \\ y = \log(x+2)+2 \end{cases},$$
 then

$27x =$

- A) 15      B) -18      C) -24      D) -4      E) 36

**Answer:** C)  $-24$