King Fahd University of Petroleum and Minerals
Prep-Year Math Program
Math (001)-Term (131)
Recitation (1. 4)

Question1: If $2+\sqrt{7}$ and $2-\sqrt{7}$ are solutions of the quadratic equation $x^2+bx+c=0$ then $b+c=$

A) -1 B) $-4+2\sqrt{7}$ C) -7 D) $4\sqrt{7}$ E) 1

Question2: If the Discriminant of the equation $\sqrt{2}x^2+kx+\frac{\sqrt{2}}{5}=0$ is equal to $\frac{8}{45}$, then find all possible value (s) of k .

Answer: $k=\pm\frac{4}{3}$

Question3:

If the equation $2x^2-\frac{5}{2}x=3-x$ is written by completing the square as $(x-a)^2=b$ find a and b.

Answer: $\left(x-\frac{3}{8}\right)^2=\frac{105}{64} \Rightarrow \boxed{a=\frac{3}{8}}, \boxed{b=\frac{105}{4}}$

Question4:

If, by completing the square for the equation $9x^2-12x+9=0$, we get $(x-a)^2=b$, then $a+b=$

A) $-\frac{11}{9}$ B) $-\frac{7}{9}$ C) $\frac{1}{9}$ D) $\frac{11}{9}$ E) $-\frac{1}{9}$

Question5:

Which one of the following is the solution of: $\frac{1}{2}x^2+\frac{3}{4}x+4=5$

A. $x=\frac{1}{2},\frac{3}{4}$ B. $x=\frac{3\pm\sqrt{41}}{8}$ C. $x=\frac{15\pm\sqrt{43}}{6}$

D. $x=\frac{-3\pm\sqrt{41}}{4}$ E. $x=-\frac{5}{6},\frac{7}{4}$

Answer: D