King Fahd University of Petroleum and Minerals
Prep-Year Math Program
Math (001)-Term (131)
Recitation (1. 6)

Question 1: The number or real solutions of the equation $(14-2x)^{\frac{2}{3}}=4$ is:

A) 2   B) 1   C) 5   D) 3   E) 0

$SS = \{11,3\}$

Question 2:
Solve the following equations:

$(a) \quad \dfrac{x}{x-1} - \dfrac{x-1}{x+1} = \dfrac{x}{x^2-1}$

$(b) \quad \left(5x^2-6\right)^{1/4} = x$

$(c) \quad x^{\frac{2}{3}} + 7x^{\frac{1}{3}} = 8$

$(d) \quad \sqrt{2-\sqrt{x}} - 2\sqrt{x} + 1 = 0$

Answer: (a): $SS = \left\{\dfrac{1}{2}\right\}$ **(b):** $SS = \{\sqrt{2}, \sqrt{3}\}$ **(c):** $SS = \{-512, 1\}$ **(d):** $SS = \{1\}$

Question 3: The **sum** of all solutions of the equation $(x+2)^{\frac{1}{2}} + x(x+2)^{\frac{3}{2}} = 0$ is:

a) 3   b) 4   c) −4   d) −3   e) −2

Question4: The solution set of the equation $2\sqrt{x-1} - \sqrt{2x-1} = 1$ consists of

A) only one positive integer.
B) two negative integers.
C) one negative and one positive integers.
D) only one negative integer.
E) two positive integers.