

الف) $x^3 - 2x^2 + x = 0$
 $x^2(x - 2 + 1) = 0$
 $x^2(x - 1) = 0$
 $x^2 = 0 \Rightarrow x = 0$
 $x - 1 = 0 \Rightarrow x = 1$
 ب) $x^3 + x^2 + x + 1 = 0$
 $x^2(x + 1) + (x + 1) = 0$
 $(x^2 + 1)(x + 1) = 0$
 $x^2 + 1 = 0 \Rightarrow x^2 = -1$ (no real solution)
 $x + 1 = 0 \Rightarrow x = -1$
 ج) $x^3 - 2x^2 + x = 0$
 $x^2(x - 2 + 1) = 0$
 $x^2(x - 1) = 0$
 $x^2 = 0 \Rightarrow x = 0$
 $x - 1 = 0 \Rightarrow x = 1$
 د) $x^3 - 2x^2 + x = 0$
 $x^2(x - 2 + 1) = 0$
 $x^2(x - 1) = 0$
 $x^2 = 0 \Rightarrow x = 0$
 $x - 1 = 0 \Rightarrow x = 1$

الف) $x^2 - 4x + 4 = 0$
 $(x - 2)^2 = 0$
 $x - 2 = 0 \Rightarrow x = 2$
 ب) $x^2 - 7x + 12 = 0$
 $(x - 3)(x - 4) = 0$
 $x - 3 = 0 \Rightarrow x = 3$
 $x - 4 = 0 \Rightarrow x = 4$
 ج) $x^2 - 4x + 4 = 0$
 $(x - 2)^2 = 0$
 $x - 2 = 0 \Rightarrow x = 2$
 د) $x^2 - 4x + 4 = 0$
 $(x - 2)^2 = 0$
 $x - 2 = 0 \Rightarrow x = 2$

الف) $\sqrt{x-2} \geq 0 \Rightarrow x-2 \geq 0 \Rightarrow x \geq 2$
 $\sqrt{x-2} \geq 0 \Rightarrow x-2 \geq 0 \Rightarrow x \geq 2$
 ب) $\sqrt{x-2} \geq 0 \Rightarrow x-2 \geq 0 \Rightarrow x \geq 2$
 $\sqrt{x-2} \geq 0 \Rightarrow x-2 \geq 0 \Rightarrow x \geq 2$
 ج) $\sqrt{x-2} \geq 0 \Rightarrow x-2 \geq 0 \Rightarrow x \geq 2$
 $\sqrt{x-2} \geq 0 \Rightarrow x-2 \geq 0 \Rightarrow x \geq 2$
 د) $\sqrt{x-2} \geq 0 \Rightarrow x-2 \geq 0 \Rightarrow x \geq 2$
 $\sqrt{x-2} \geq 0 \Rightarrow x-2 \geq 0 \Rightarrow x \geq 2$



