

King Fahd University of Petroleum and Minerals
Math001
Quiz(3.2,3.3) 6B

Name: _____,
ID#: _____, Sec#: _____

1) The Polynomial $p(x) = 3x^3 + 7x^2 + 3x + 7$ has at least one real zero in the interval:

- 1) $[-2, -1]$ 2) $[-3, -2]$ 3) $[-1, 0]$ 4) $[0, 1]$ 5) $[1, 2]$

2) The graph of the polynomial function $f(x) = (1 - x)(x^2 - 3x + 2)$ is above the x-axis on:

- 1) $(-\infty, -1) \cup (1, 2)$ 2) $(1, 2)$ 3) $(-\infty, 2)$ 4) $(2, \infty)$

3) According to Descartes' rule of signs, the polynomial $P(x) = 4x^4 - 12x^3 - 3x^2 + 12x - 7$ has:

- 1) One or three negative real zeros. 2) One negative real zero
3) four positive real zeros
4) no positive real zero 5) three negative real zeros

4) All possible zeros of the polynomial $p(x) = 2x^5 - 2x^4 + 7x^3 - 8x^2 + 4x - 16$ are:

- 1) $\pm 1, \pm \frac{1}{2}, \pm 2, \pm 4, \pm 8, \pm 16$ 2) $\pm 1, \pm 2, \pm 4, \pm 8, \pm 16$ 3) $\pm 1, \pm \frac{1}{2}, \pm \frac{1}{4}, \pm \frac{1}{8}, \pm \frac{1}{16}$
4) $\pm 1, \pm \frac{1}{2}, \pm \frac{1}{4}, \pm \frac{1}{8}, \pm \frac{1}{16}, \pm 2$

5) The smallest positive integer that is an upper bound for the real zeros of $f(x) = 2x^3 + 4x^2 - 8x + 3$ is:

- 1) 2 2) 4 3) 3 4) 1