Math 477 "QUIZ" for Lecture 7

NAME: (print!) _____

E-MAIL ADDRESS: (print!) _____

1 . The probability mass function of the discrete random variable X is

$$P(X = 0) = 0.1 \quad , \quad P(X = 1) = 0.5 \quad , \quad P(X = 2) = 0.4 \quad ,$$

and $P(X = x) = 0$ if $x \notin \{0, 1, 2\}$. Find

(i) $E[2X^3 - 3X + 1]$

(ii) $E[\cos(\pi X/2)]$

2. Let X be the winnings of a gambler and assume that

$$P(X = 0) = 0.4 \quad ; \quad P(X = 1) = 0.2 \quad ; \quad P(X = -1) = 0.3 \quad ; \quad P(X = -2) = 0.1 \quad .$$

Find the variance $Var(X)$. Also find the standard deviation.