Community College of Philadelphia **Spring 2012**
Math 251-Satistics for Science **Dr. Yun Yoo**

Attendance Quiz 7

Name:_____Date:_____

1. A study consists of randomly selecting 4 newborn babies and counting the number of boys. If we assume that boys and girls are equally likely and let *x* be the number of boys among 4 babies. Complete the probability distribution first then answer the questions.

x (boys)	*P(x)*	$x \bullet P(x)$	$(x-\mu)^2$	$x^2 \bullet P(x)$
	$\sum P(x) =$	$\sum x \bullet P(x) =$	$\sum (x-\mu)^2 =$	$\sum [x^2 \bullet P(x)] =$

(a). Find the mean for a probability distribution. ($\mu = \sum [x \bullet P(x)]$)

(b).Find the standard deviation for a probability distribution.
($\sigma = \sqrt{\sum [x^2 \bullet P(x)] - \mu^2}$ or $\sigma = \sqrt{\sum [(x-\mu)^2 \bullet P(x)]}$)
But I highly recommend first one.

(c). Find the variance for a probability distribution.