Ch.5-2 HO

$E(x)$, σ^2, σ for the prob. distrn. of problem # 5.8 P219 (see class notes)
x = # of sales in a 2-day period

x	$p(x)$	$xp(x)$	x^2	$x^2p(x)$
0	.49	0	0	0
1	.28	.28	1	.28
2	.18	.36	4	.72
3	.04	.12	9	.36
4	.01	.04	16	.16
	1.00	$\sum xp(x)$ = .80		$\sum x^2p(x)$ = 1.52

$$\mu = E(x) = \sum_{\text{all } x\text{-values}} xp(x) = .80$$

$$\sigma^2 = \left(\sum x^2p(x)\right) - \mu^2 = 1.52 - (.80)^2$$

$$\sigma^2 = 1.52 - .64 = 0.88$$

$$\sigma = \sqrt{0.88} = .938$$