Section 3.6

23.

$$F(x) = \begin{cases} 0 & x < 1 \\ .30 & 1 \le x < 3 \\ .40 & 3 \le x < 4 \\ .45 & 4 \le x < 6 \\ .60 & 6 \le x < 12 \\ 1 & 12 \le x \end{cases}$$

$P(1) = F(1 \le x < 3) - F(x < 1)$

$= .30$

$P(3) = F(3 \le x < 4) - F(1 \le x 3)$

$= 1.5$

$P(4) = F(4 \le x < 6) - F(3 \le x < 4)$

$= .05$

$P(6) = F(6 \le x < 12) - F(4 \le x < 6)$

$= ,15$

$P(12 \le x) - F(6 \le x 12)$

$= 40$

c) $P(3 \leq x \leq 6)$

$= P(x \leq 6) - P(x < 3)$

$0-6 \qquad 0-2,99$

$= 30$

3.3.

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a)

x	0	1	2	3	4
p(x)	.08	.15	45	.27	.05

$$E(x) = \sum_{i=0}^{4} p(i) \cdot i$$

$= 1 \cdot .15 + 2 \cdot .45 + 3 \cdot .27 + 4 \cdot .05$

$= 2,06$

b) $V(x) = \sum_{D} (x-\mu)^2 \cdot p(x) = E(X \cdot \mu)$

$= \sum (x - 2,06)^2 \cdot px$

$E(x^2) - [E(x)]^2$