

$$E(X) = \sum x \cdot P(x)$$

$$E(X^2) = \sum x^2 \cdot P(x)$$

$$V(X) = E(X^2) - [E(X)]^2$$

X	$P(X)$	$X \cdot P(X)$	
0	0.4	0	0.0
1	0.3	0.3	0.3
2	0.2	0.4	0.8
3	0.1	0.3	0.9

$$E(X) = 1$$

$$E(2X+7) = \sum f(2x+7) \cdot P(2x+7)$$

$$2 E(X) + 7 =$$

$$2(1) + 7 = 9$$

$$2 E(X) + 7$$

$$V(X) = E(X^2) - [E(X)]^2$$

$$= 9 - 1$$

$$= 8$$

$$V(7X+1) =$$

$$V(a) = 0$$

$$V(ax) = a^2 V(x)$$

$$V(ax+b) = a^2 V(x)$$

$$E(a) = a$$

$$E(ax) = a E(X)$$

$$E(ax+b)$$

$$a E(X) + b$$

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