

1.1 The random variable x has the following probability distribution. Find its mean, variance, and standard deviation. First fill in the missing probability. Show your work. Also do the work on your calculator as backup.

Formulas: $\mu = \sum x p(x)$ $\sigma = \sqrt{\sum x^2 p(x) - \mu^2}$

L1 L2 STAT >> CALC 1-Var Stats L1,L2

↓ ↓

<u>x</u>	<u>P(x)</u>	<u>x P(x)</u>	<u>x²</u>	<u>x²P(x)</u>
0	0.1	0.0	0	0.0
2	0.3	0.6	4	1.2
4	0.1	0.4	16	1.6
6	0.5	<u>3.0</u>	36	<u>18.0</u>
E = $\mu =$		4.0		20.8

$$\sigma = \sqrt{20.8 - 4^2} \quad \sigma = \sqrt{4.8} \quad \approx \boxed{2.19}$$

$$\sigma^2 = (\sqrt{4.8})^2 = \boxed{4.8}$$

STUDY: Chapter 4: Section 4.2

- Discrete probability distributions