

$$1. \text{Min} = 0.51 \quad \bar{X} = 1.178182$$

$$Q_1 = 0.89 \quad S = 0.337426$$

$$Q_2 = 1.38$$

$$Q_3 = 1.45$$

$$\text{Max} = 1.49$$

$$2. \text{Min} = 120 \quad \bar{X} = 133.9286$$

$$Q_1 = 130 \quad S = 9.04233$$

$$Q_2 = 132.5$$

$$Q_3 = 140$$

$$\text{Max} = 150$$

$$3. n = 7$$

$$X = 4$$

$$p = 0.5$$

$$q = 1 - p = 1 - 0.5 = 0.5$$

$$P(X=x) = \binom{n}{x} p^x q^{n-x}$$

$$P(X=4) = \binom{7}{4} 0.5^4 (0.5)^{7-4} = 0.2734375$$

$$4. n = 8, p = 0.5, q = 0.5, X = 0 \text{ or } X = 1 \text{ or } X = 2, \text{ or } X = 3, \text{ or } X = 4$$

$$P(X=0) + P(X=1) + P(X=2) + P(X=3) + P(X=4) = 0.6367188$$

$$= 0.637$$

$$5. n = 8, p = 0.5, q = 0.5, X = 0 \text{ or } X = 1 \text{ or } X = 2 \text{ or } X = 3$$

$$P(X=0) + P(X=1) + P(X=2) + P(X=3) = 0.363$$

6. $n = 9$, $p = 0.5$, $q = 0.5$, $X = 3$, or $X = 4$ or $X = 5$

$$P(X=3) + P(X=4) + P(X=5) = 0.65625$$