Practice worksheet | Discrete probability distributions

Variance and standard deviation

Name: _____ Date: _____

6 questions | 13 marks

1. X is 0 or 2 with equal probabilities. Find its mean and variance. [2 marks]

2. $E(X) = 3$ and $E(X^2) = 14$. Find variance and standard deviation. [2 marks]

3. X is -1 or 1 with equal probabilities. Find its mean and standard deviation. [2 marks]

4. A payout in dollars has variance 9. State its standard deviation and units. [2 marks]

5. X has values 1, 2 and 3 with probabilities 1/4, 1/2 and 1/4. Find $E(X^2)$ and Var(X). [3 marks]

6. A student obtains $\text{Var}(X) = -0.8$ from a valid exact probability table. Explain why this cannot be accepted. [2 marks]