Practice worksheet | Discrete probability distributions

Probability functions and cumulative probabilities

Name: _____ Date: _____

6 questions | 13 marks

1. For probabilities 0.2, 0.5 and 0.3 at $x = 0$, 1, 2, give $F(0)$, $F(1)$ and $F(2)$. [3 marks]

2. For the same distribution, find $P(X < 2)$. [2 marks]

3. An integer-valued X has $F(2) = 0.65$ and $F(3) = 0.90$. Find $P(X = 3)$. [2 marks]

4. X takes only the values 2, 5 and 8, with probabilities 0.1, 0.6 and 0.3. Find $F(6)$. [2 marks]

5. For integer-valued X, $F(1) = 0.3$ and $F(4) = 0.95$. Find $P(2 \leq X \leq 4)$. [2 marks]

6. A proposed cumulative function has $F(1) = 0.7$ and $F(2) = 0.6$. Explain why it is impossible. [2 marks]