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 ≤ X ≤ 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]