Practice worksheet | Statistics and regression

Normal probabilities and inverse-normal values

Name: _____ Date: _____

6 questions | 18 marks

1. For Z standard normal, calculate $P(Z < 1.2)$. [3 marks]

2. For Z standard normal, calculate $P(Z > 1.2)$. [3 marks]

3. For X with mean 50 and SD 6, find $P(44 < X < 62)$. [3 marks]

4. For X with mean 100 and SD 12, find the 25th percentile. [3 marks]

5. A normal quality model gives $P(\text{pass}) = 0.94$. Out of 250 items, find the expected number passing. [3 marks]

6. Find the upper 5% cutoff for a normal variable with mean 40 and SD 3. [3 marks]