Practice worksheet | Continuous probability and normal distributions

Standardisation and z-scores

Name: _____ Date: _____

6 questions | 13 marks

1. $X \sim N(40, 25)$. Standardise $X = 47.5$. [2 marks]

2. $X \sim N(20, 4)$. Write $P(18 < X < 23)$ using Z. [2 marks]

3. A normal variable has mean 70 and SD 12. Find the value with $z = 0.75$. [2 marks]

4. Two scores have z-values -0.4 and 1.2. Which is further above its own mean? [2 marks]

5. Does standardising a strongly skewed variable guarantee a normal shape? [2 marks]

6. $X \sim N(50, 36)$. Find $P(X < 44)$ to four decimal places. [3 marks]