Practice worksheet | Continuous probability and normal distributions

Normal distributions

Name: _____ Date: _____

6 questions | 12 marks

1. $X \sim N(12, 9)$. State mean and standard deviation. [2 marks]

2. A normal model has mean 40 and standard deviation 6. Give the central two-SD interval. [2 marks]

3. Why is the probability at exactly the normal mean not 0.5? [2 marks]

4. Does doubling the standard deviation change the total density area? [2 marks]

5. A waiting-time distribution has a very long right tail. Is a symmetric normal model automatically suitable? [2 marks]

6. $X \sim N(30, 4)$. Estimate $P(28 < X < 32)$ using the empirical rule. [2 marks]