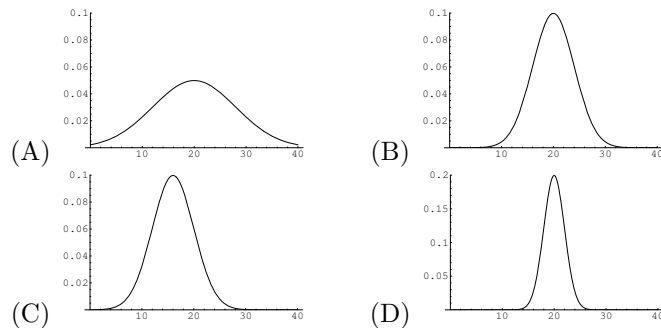


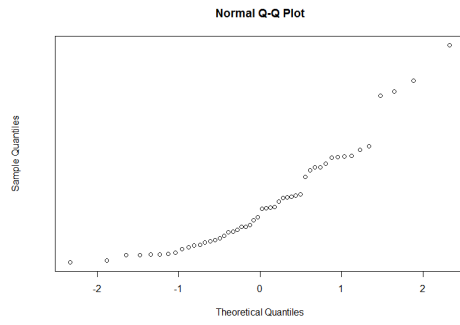
**Math 216**  
**Chapter 3 Clicker Questions**

- Consider  $X$ , the weight in pounds of a randomly selected newborn baby. Suppose that  $X$  is a normal random variable with mean  $m = 7.57$  and standard deviation  $s = 1.06$ . If the standard deviation were  $s = 1.26$  instead, how would that change the graph of the pdf of  $X$ ?
  - Narrower, greater max value
  - Narrower, lesser max value
  - Narrower, same max value
  - Wider, greater max value
  - Wider, lesser max value
  - Wider, same max value
- Consider  $X$ , the weight in pounds of a randomly selected newborn baby. Suppose that  $X$  is a normal random variable with mean  $m = 7.57$  and standard deviation  $s = 1.06$ . If the mean were  $m = 7.27$  instead, how would that change the graph of the pdf of  $X$ ?
  - Shifted to the left
  - Shifted to the right
  - More negatively skewed
  - More positively skewed
  - Greater max value
  - Lesser max value
- If  $X$  is a normal random variable with mean  $m = 20$  and standard deviation  $s = 4$ , which of the following could be the graph of the pdf of  $X$ ?

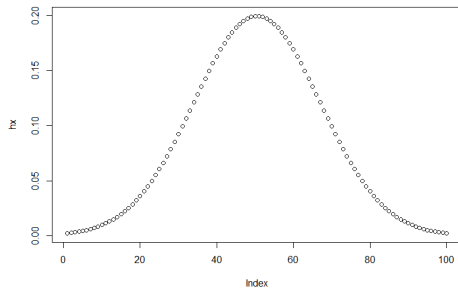


- Let  $Z$  be a standard normal random variable. Which of the following probabilities is the smallest?
  - $P(-2 < Z < -1)$
  - $P(0 < Z < 2)$
  - $P(Z < 1)$
  - $P(Z > 2)$
- Let  $Z$  be a standard normal random variable. Which of the following probabilities is the smallest?
  - $P(0 \leq Z \leq 2.07)$
  - $P(-0.64 \leq Z \leq -0.11)$
  - $P(Z > -1.06)$
  - $P(Z < -0.88)$

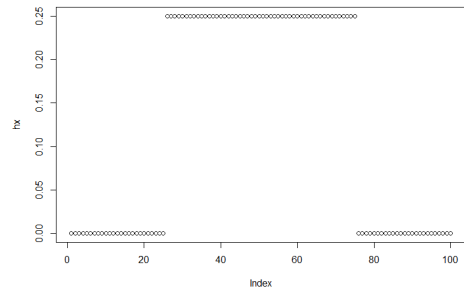
6. Which of the distributions below generated this probability plot?



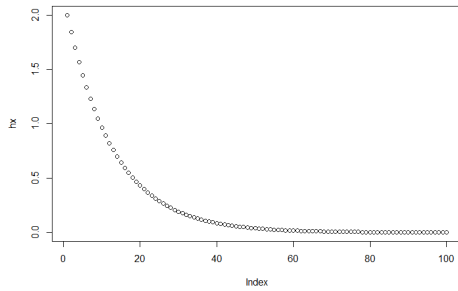
A.



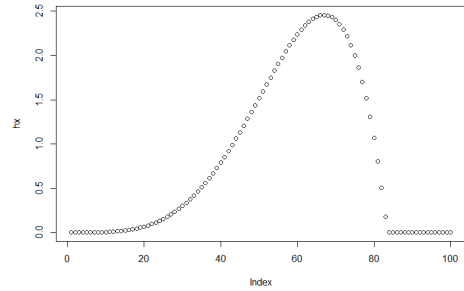
B.



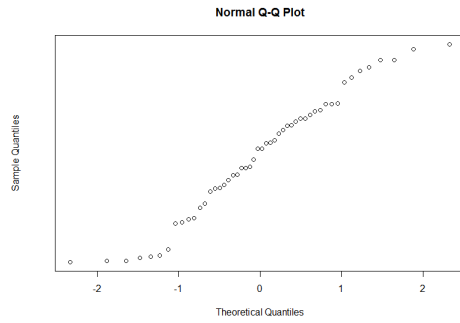
C.

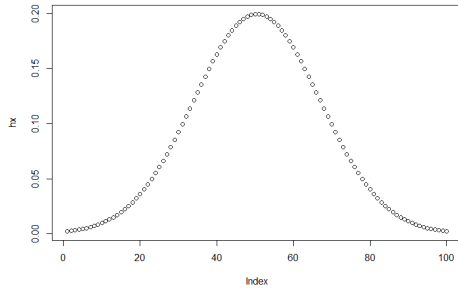


D.

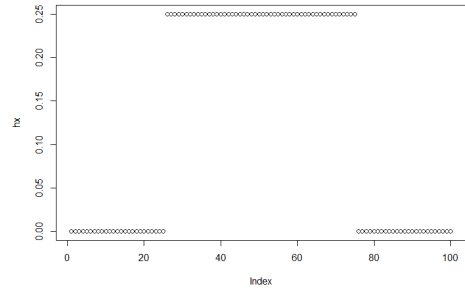


7. Which of the distributions below generated this probability plot?

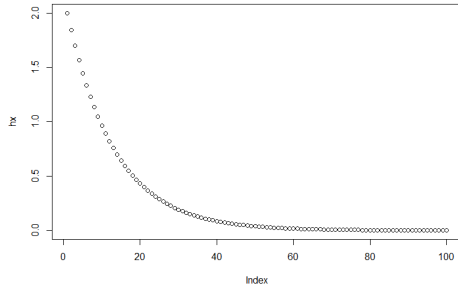




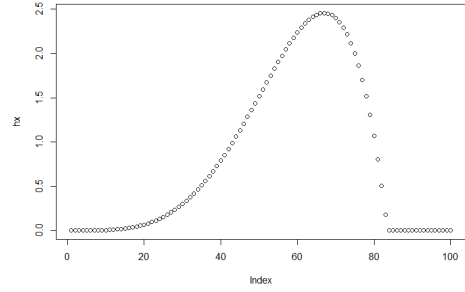
A.



B.

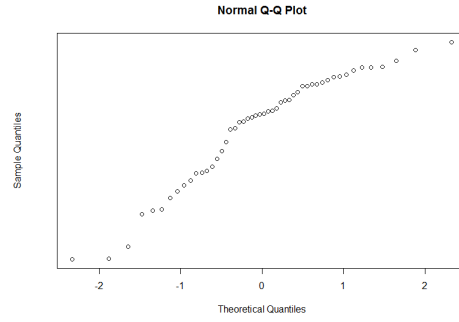


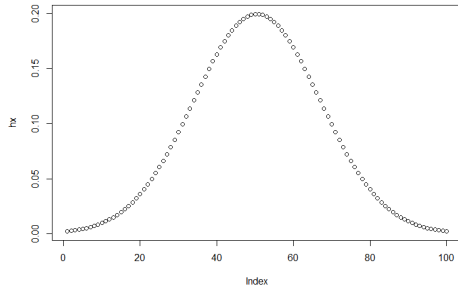
C.



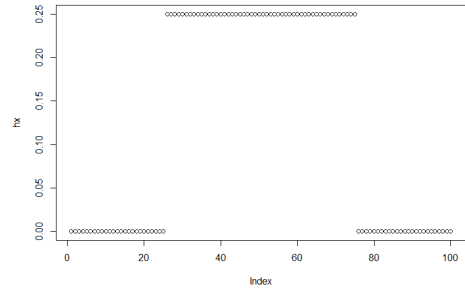
D.

8. Which of the distributions below generated this probability plot?

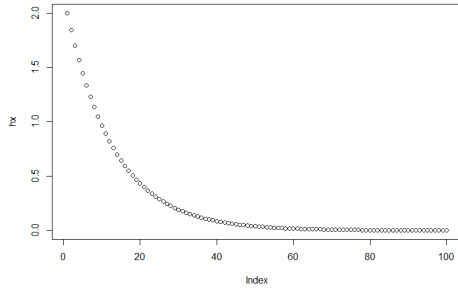




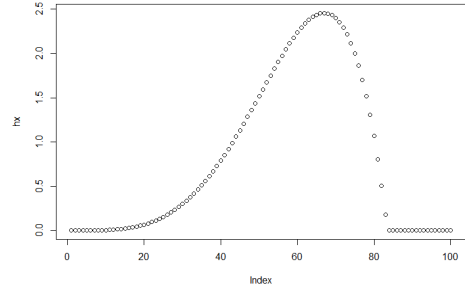
A.



B.



C.



D.

9. Suppose that trucks arrive at a receiving dock with an average arrival rate of 3 per hour. What is the probability exactly 5 trucks will arrive in a two-hour period?

- (A)  $\frac{e^{-3}3^5}{5!}$
- (B)  $\frac{e^{-3}3^{2.5}}{2.5!}$
- (C)  $\frac{e^{-6}6^5}{5!}$
- (D)  $\frac{e^{-5}5^6}{6!}$

## Answers

1. E
2. A
3. B
4. D
5. D
6. C
7. B
8. D
9. C