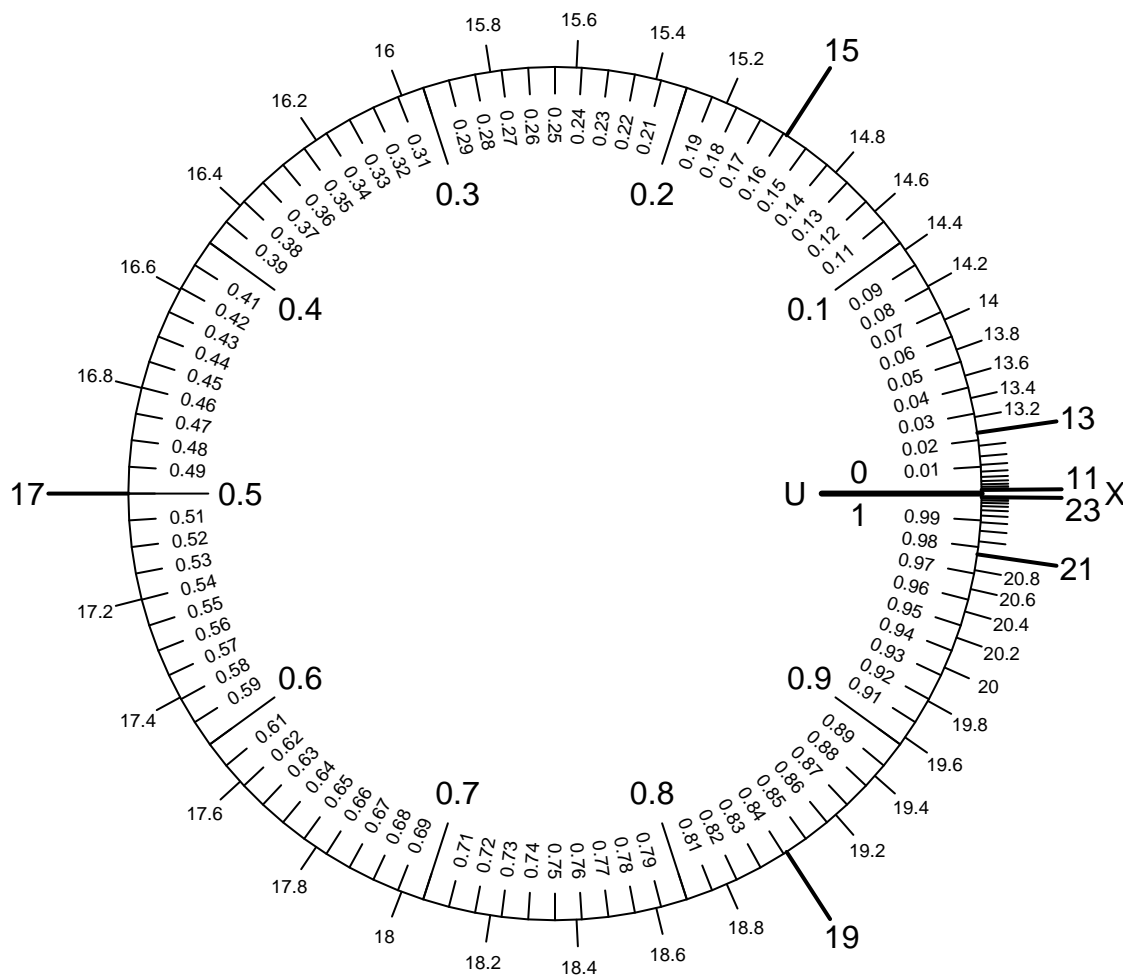


Question

The spinner below has two distributions. The outer distribution (X) is a normal distribution with mean $\mu = 17$ and standard deviation $\sigma = 2$.

$$X \sim \mathcal{N}(17, 2)$$

The inner distribution (U) is the standard uniform distribution, which also corresponds to the percentile. To answer the questions below, assume the spinner is equally likely to land in any direction.



Answerlist — * Determine a such that $P(|X - 17| > a) = 0.38$ * Determine x such that $P(X < x) = 0.57$ * Evaluate $P(|X - 17| < 2)$ * Evaluate $P(X > 16)$ * Evaluate $P(X < 15.8)$ * Determine x such that $P(X > x) = 0.09$ * Evaluate $P(17.2 < X < 17.8)$ * Determine a such that $P(|X - 17| < a) = 0.24$ * Evaluate $P(|X - 17| > 2.4)$

Solution

Answerlist

- $z = \boxed{1.76}$
- $x = \boxed{17.36}$
- $P(|X - 17| < 2) = \boxed{0.683}$
- $P(X > 16) = \boxed{0.691}$

- $P(X < 15.8) =$
- $x =$
- $P(17.2 < X < 17.8) =$
- $a =$
- $P(|X - 17| > 2.4) =$

Meta-information

extype: string exsolution: yo exname: UZ extol: 0.01