CEE 110

Discussion Week 7

13.

a. k = 3

b. $F(x) = \begin{cases} 0, & X < 1 \\ 1 - \frac{1}{X^3}, & X \geq 1 \end{cases}$

c. $P(x \geq 2) = 0.125$

$P(2 < x < 3) = 0.088$

d. Mean E(x) = 1.5. Standard deviation =0.866

e. 0.9245

35.

a. $P(X \geq 10) = 0.0455$

$P(X > 10) = P(X \geq 10) = 0.0455$

b. $P(X > 15) \approx 0$

c. $P(8 \leq X \leq 10) = 0.6460$

d. c = 2.13

e. 0.1700

39.

a. $P(X \leq 20) = 0.1003$

$P(X < 20) = 0.1003$

b. The 75th percentile of the defect length distribution is 35.226 mm.

c. 21.888 mm

d. 10th percentile: 20.016 mm and 90th percentile: 39.984 mm.