

Question #174

Key: A

$$\hat{H}(t_2) = \frac{1}{n} + \frac{1}{n-1} = \frac{2n-1}{n(n-1)} = \frac{39}{380} \Rightarrow 39n^2 - 799n + 380 = 0 \Rightarrow n = 20, n = 0.487.$$

Discard the non-integer solution to have $n = 20$.

The Kaplan-Meier Product-Limit Estimate is:

$$\hat{S}(t_9) = \frac{19}{20} \frac{18}{19} \dots \frac{11}{12} = \frac{11}{20} = 0.55.$$