

**1.** You are given:

(i) Losses follow a loglogistic distribution with cumulative distribution function:

$$F(x) = \frac{(x/\theta)^\gamma}{1 + (x/\theta)^\gamma}$$

(ii) The sample of losses is:

10      35      80      86      90      120      158      180      200      210      1500

Calculate the estimate of  $\theta$  by percentile matching, using the 40<sup>th</sup> and 80<sup>th</sup> empirically smoothed percentile estimates.

- (A) Less than 77
- (B) At least 77, but less than 87
- (C) At least 87, but less than 97
- (D) At least 97, but less than 107
- (E) At least 107