56. You are given the following information about a group of policies:

Claim Payment	Policy Limit
5	50
15	50
60	100
100	100
500	500
500	1000

Determine the likelihood function.

(A) $f(50)f(50)f(100)f(100)f(500)f(1000)$

(B) $f(50)f(50)f(100)f(100)f(500)f(1000)/[1-F(1000)]$

(C) $f(5)f(15)f(60)f(100)f(500)f(500)$

(D) $f(5)f(15)f(60)f(100)f(500)f(1000)/[1-F(1000)]$

(E) $f(5)f(15)f(60)[1-F(100)][1-F(500)]f(500)$

35. You are given the following information about a credibility model:

First Observation	Unconditional Probability	Bayesian Estimate of Second Observation
1	1/3	1.50
2	1/3	1.50
3	1/3	3.00

Calculate the Bühlmann credibility estimate of the second observation, given that the first observation is 1.

(A)   0.75

(B)   1.00

(C)   1.25

(D)   1.50

(E)   1.75

36. DELETED

37. A random sample of three claims from a dental insurance plan is given below:

$$225 \quad 525 \quad 950$$

Claims are assumed to follow a Pareto distribution with parameters $\theta = 150$ and α.

Calculate the maximum likelihood estimate of α.

(A)   Less than 0.6

(B)   At least 0.6, but less than 0.7

(C)   At least 0.7, but less than 0.8

(D)   At least 0.8, but less than 0.9

(E)   At least 0.9