

37. The lifetime of a printer costing 200 is exponentially distributed with mean 2 years.

The manufacturer agrees to pay a full refund to a buyer if the printer fails during the first year following its purchase, and a one-half refund if it fails during the second year.

If the manufacturer sells 100 printers, how much should it expect to pay in refunds?

(A) 6,321

(B) 7,358

(C) 7,869

(D) 10,256

(E) 12,642