

**112.** In a clinic, physicians volunteer their time on a daily basis to provide care to those who are not eligible to obtain care otherwise. The number of physicians who volunteer in any day is uniformly distributed on the integers 1 through 5. The number of patients that can be served by a given physician has a Poisson distribution with mean 30.

Determine the probability that 120 or more patients can be served in a day at the clinic, using the normal approximation with continuity correction.

(A)  $1 - \Phi(0.68)$

(B)  $1 - \Phi(0.72)$

(C)  $1 - \Phi(0.93)$

(D)  $1 - \Phi(3.13)$

(E)  $1 - \Phi(3.16)$