98. You own a fancy light bulb factory. Your workforce is a bit clumsy – they keep dropping boxes of light bulbs. The boxes have varying numbers of light bulbs in them, and when dropped, the entire box is destroyed.

You are given:

Expected number of boxes dropped per month:	50
Variance of the number of boxes dropped per month:	100
Expected value per box:	200
Variance of the value per box:	400

You pay your employees a bonus if the value of light bulbs destroyed in a month is less than 8000.

Assuming independence and using the normal approximation, calculate the probability that you will pay your employees a bonus next month.

(A) 0.16

(B) 0.19

(C) 0.23

(D) 0.27

(E) 0.31