

**163.** The scores on the final exam in Ms. B's Latin class have a normal distribution with mean  $\theta$  and standard deviation equal to 8.  $\theta$  is a random variable with a normal distribution with mean equal to 75 and standard deviation equal to 6.

Each year, Ms. B chooses a student at random and pays the student 1 times the student's score. However, if the student fails the exam (score  $\leq 65$ ), then there is no payment.

Calculate the conditional probability that the payment is less than 90, given that there is a payment.

- (A) 0.77
- (B) 0.85
- (C) 0.88
- (D) 0.92
- (E) 1.00