8.3 QUIZ QUESTION 1 (1/1 point)

Assume that a student took a final exam with an equal number of "easy" and "hard" questions. Assume that the student made errors on only 12% of the "easy" questions, but made errors on 24% of the "hard" questions. If a question is selected at random (all questions have equal probablity of being selected), what is the probability that the student made an error on that question?

Please key in the numerical value of your answer as a probability lying between 0 and 1 in the box provided below.

0.18

0.18

Answer: 0.18

EXPLANATION

Since the hard questions and easy questions are equally likely to occur,

$$P_{error} = P_{e|easy} * P[ques = easy] + P_{e|hard} * P[ques = hard]$$

$$= 0.12 * 0.5 + 0.24 * 0.5 + = 0.18$$

Check Save Hide Answer *You have used 1 of 3 submissions*

8.3 QUIZ QUESTION 2 (1/1 point)

Suppose that the test is made easier. There are twice as many "easy" questions as "hard" questions. If the probability of error on the "easy" and "hard" questions remains the same, what is the probability the student makes an error on a randomly selected question?

Please key in the numerical value of your answer as a probability lying between 0 and 1 in the box provided below.

0.16

0.16

Answer: 0.16

Help

EXPLANATION

Since the easy questions are twice as likely to occur as the difficult ones,

$$P_{error} = P_{e|easy} * P[ques = easy] + P_{e|hard} * P[ques = hard]$$

$$= 0.12 * (2/3) + 0.24 * (1/3) = 0.16$$

Check Save Hide Answer *You have used 1 of 3 submissions*