Congratulations! You passed!

Grade received 77.77% **To pass** 75% or higher

Lesson 5.1-5.2

Quiz • 30 min **Go to next item**

Submit your assignment

Due Nov 1, 2:59 AM EDT **Attempts** 3 every 8 hours

Lesson 5.1-5.2

Latest Submission Grade 77.77%

Try again

1. For Questions 1-5, consider the following scenario: **1 / 1 point**

Receive grade

To Pass 75% or higher

Your grade

77.77%

View Feedback

We keep your highest score

You are trying to ascertain your American colleague's political preferences. To do so, you design a questionnaire with five yes/no questions relating to current issues. The questions are all worded so that a "yes" response indicates a conservative viewpoint.

Let θ be the unknown political viewpoint of your colleague, which we will assume can only take values $\theta = \text{conservative}$ or $\theta = \text{liberal}$. You have no reason to believe that your colleague leans one way or the other, so you assign the prior $P(\theta = \text{conservative}) = 0.5$.

Assume the five questions are independent and let Y count the number of "yes" responses. If your colleague is conservative, then the probability of a "yes" response on any given question is 0.8. If your colleague is liberal, the probability of a "no" response on any given question is 0.7.

- What is an appropriate likelihood for this scenario?