Question 1

Hugo is trying to complete his card collection and needs just one last card. He can obtain cards from biscuit packs, and each pack has a 0.2 probability of containing the card he needs. Hugo has enough money to buy at most 4 packs, but he will stop buying as soon as he finds the missing card. Let X be the number of packs Hugo buys.

Part 1: What is the probability distribution of X?

Solution

Answer

$\square$

Part 2: What is the probability that Hugo successfully completes his collection?

Solution

Answer

$\square$

Part 3: Given that Hugo completes the collection, what is the probability that he only buys one pack?

Solution

Answer

$\square$