QUESTION

A box contains 10 computer disks. If it is known that exactly 1 of the disks is faulty what is the probability that none of the first three disks taken from the box, without replacement, are faulty?

ANSWER

p(first 3 not faulty)

$= p$(first not faulty and second not faulty and third not faulty)

$$= \frac{9}{10} \times \frac{8}{9} \times \frac{7}{8} = \frac{7}{10}$$