

Show all work clearly and in order. Justify your answers.

Suppose a company ships boxes of cookies. Each box contains 8 chocolate chip cookies and 4 raisin cookies.

(a) If you take one cookie each at random out of 6 different boxes, what is the probability you get at least one raisin cookie?

(b) Suppose a certain box was mistakenly shipped with 10 chocolate chip and 6 raisin cookies. If you select 3 cookies out of this box at random, what is the probability you get a raisin cookie?