Answer on Question #69021 – Math – Statistics and Probability

Question

If 50 (FIFT) classes of 20 (TWENTY) students are randomly selected, what is the probability that 10 (TEN) classes have no left-handed students?

Solution

We assume that 8% of students are left handed.

$$P(\text{ no one in a class is left} - \text{handed}) = 0.92^{20} = 0.1887$$
$$P(\text{at least one left} - \text{handed in a class}) = 1 - 0.1887 = 0.8113$$

The required probability is

$$P(10\ classes\ have\ no\ left - handed\ students) =$$
$$= C_{50}^{10} * 0.18869^{10} * 0.81131^{40} = 0.1370.$$

Answer: 0.1370 .