

Roughly 20% of undergraduates at a university are vegetarian or vegan. What is the probability that, among a random sample of 3 undergraduates, at least one is vegetarian or vegan?

(a) $1 - 0.2 \times 3$

(b) $1 - 0.2^3$

(c) 0.8^3

(d) $1 - 0.8 \times 3$

(e) $1 - 0.8^3$

$P(\text{at least 1 from veg})$

$= 1 - P(\text{none veg})$

$= 1 - 0.8^3$

$= 1 - 0.512 = 0.488$