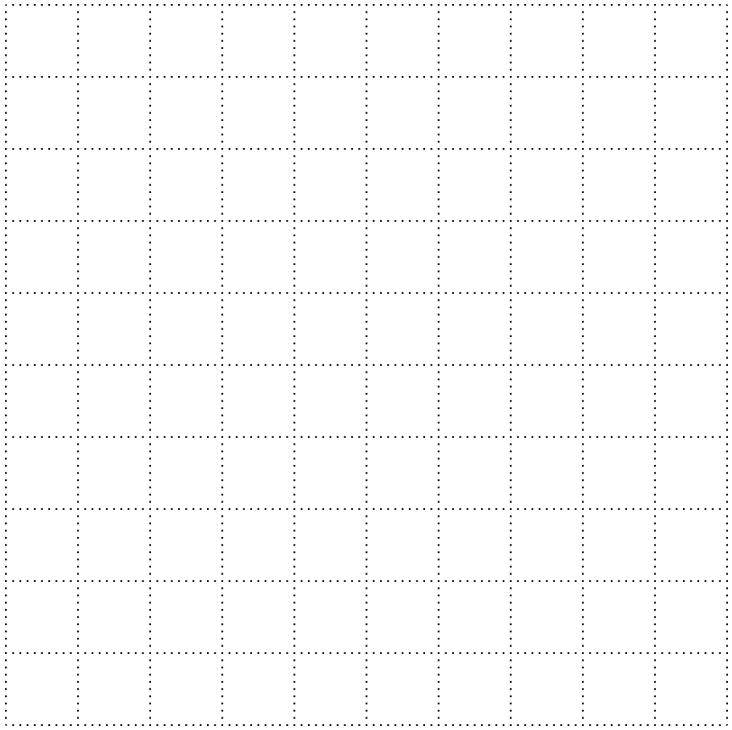
Q1: Given:

$$P(A) = 0.7$$
$$P(B|A) = 0.4$$
$$P(B|A^c) = 0.5$$

a: Create a tree diagram to find all the joint probabilities.

b: Make a contingency table.

c: Using the grid, draw a quantitative Venn diagram.



d: $P(B) = ?$

e: $P(A \text{ AND } B) = ?$

f: $P(A^c \text{ AND } B) = ?$

g: $P(A \text{ OR } B) = ?$

h: $P(A|B) = ?$

i: $P(A|B^c) = ?$