

2022/06/10

PROBABILITY ASSIGNMENT

- 1) PROBABILITY OF NOT CHOOSING A MAN IS ALSO CHOOSING A WOMAN

$$\frac{\text{TOTAL NUMBER OF WOMAN}}{\text{TOTAL NUMBER OF PEOPLE}} = \frac{24}{45} \quad \text{--- (a)}$$

- 2) NEXT YEAR, TRAVELING BY PLANE AND PLANE CRASH ARE TWO SEPARATE PROBABILITIES, FOR THIS REASON THEY ARE INDEPENDENT

$$P(A) = \text{TRAVEL BY PLANE}$$

$$P(B) = \text{PLANE CRASH}$$

$$P(A \cap B) = (0.10) (0.005) = 0.0005\% \quad \text{--- (d)}$$

- 3) PEOPLE WHO SURF LONGER ARE LIKELY TO CLICK MORE LINKS, INCREASING THE ODDS OF GETTING A SURVEY --- (b)

- 4) PROBABILITY OF FALSE POSITIVE = 0.1

PROBABILITY

OR
PRODUCTION
WAS NOT THE
DISEASE

$$= 0.995$$

PROBABILITY
OF
GIVING A
POSITIVE RESULT

$$= 0.98$$

PROBABILITY
OF
PRODUCTION
WAS DISEASE

$$= 0.005$$

$$> 0.1 \times 0.995 = 0.0995$$

$$0.0995 + 0.0049$$

$$= 0.1044$$

(c)

$$0.98 \times 0.005 = 0.0049$$