

i) H T T H

$$H \rightarrow 0.5$$

$$T \rightarrow 0.5$$

$$P(\text{HTTH}) = 0.5 \times 0.5 \times 0.5 \times 0.5 = \boxed{0.625} \text{ for all 3 patterns}$$

2) ~~P(Plane)~~

$$P(\text{not choosing a man}) = 1 - P(\text{choosing a man})$$

$$= 1 - \left(\frac{21}{25} \right) = \boxed{0.54}$$

3) $P(\text{plane crash}) = 0.005\%$

$$P(\text{Berice travel}) = 10\%$$

both are independent

$$\text{so, } P(\text{berice}) \& P(\text{plane crash})$$

$$= 0.005 \times 0.10$$

$$= 0.0005$$

4) The survey only has 5% of asking users to do survey. people who browse

longer have more chances to complete the survey. This leaves the users who browse for shorter time.