6. a) $P(\text{FEMALE} \mid \text{RED})$

$= \frac{7}{9}$

b) $P(\text{BLONDE} \mid \text{MALE})$

$= \frac{5}{32}$

7. $P(3 \text{ QUEENS})$

a) $P(Q \text{ AND } Q \text{ AND } Q)$

$\frac{4}{52} \cdot \frac{4}{52} \cdot \frac{4}{52}$

$= 4.5517 E-4$

$= 0.0004552$

b) $P(3 \text{ QUEENS})$

$\frac{4}{52} \cdot \frac{3}{51} \cdot \frac{2}{50}$

QD QH

$1.8099 E-4$

$= .000181$

8. 10 M
13 W

$P(W \text{ AND } W)$

$= \frac{13}{23} \cdot \frac{12}{22}$

$= 0.3083$

9. $P(3 \text{ of A KIND})$

$= \frac{52}{52} \cdot \frac{3}{51} \cdot \frac{2}{50} \cdot \frac{48}{49} \cdot \frac{47}{48}$

"K" "K" "K" Q
♡ ◇ C ♡

$= 0.0023$

10. 10 BLACK
5 BLUE
3 RED
7 GREEN

a) $P(G-G) = \frac{7}{25} \cdot \frac{6}{24}$

b) $P(G-B) = \frac{7}{25} \cdot \frac{10}{24}$

c) $P(B-G) = \frac{10}{25} \cdot \frac{7}{24}$

d) $P(\text{ONE IS BLACK AND ONE IS GREEN})$

$= P(B-G) \text{ OR } P(G-B)$

$= \frac{10}{25} \cdot \frac{7}{24} + \frac{7}{25} \cdot \frac{10}{24}$

EX:

300,000 PEOPLE
150,000 WOMEN

$P(W \text{ AND } W)$

$= \frac{150000}{300000} \cdot \frac{149999}{299999} \cdot \frac{150000}{300000}$