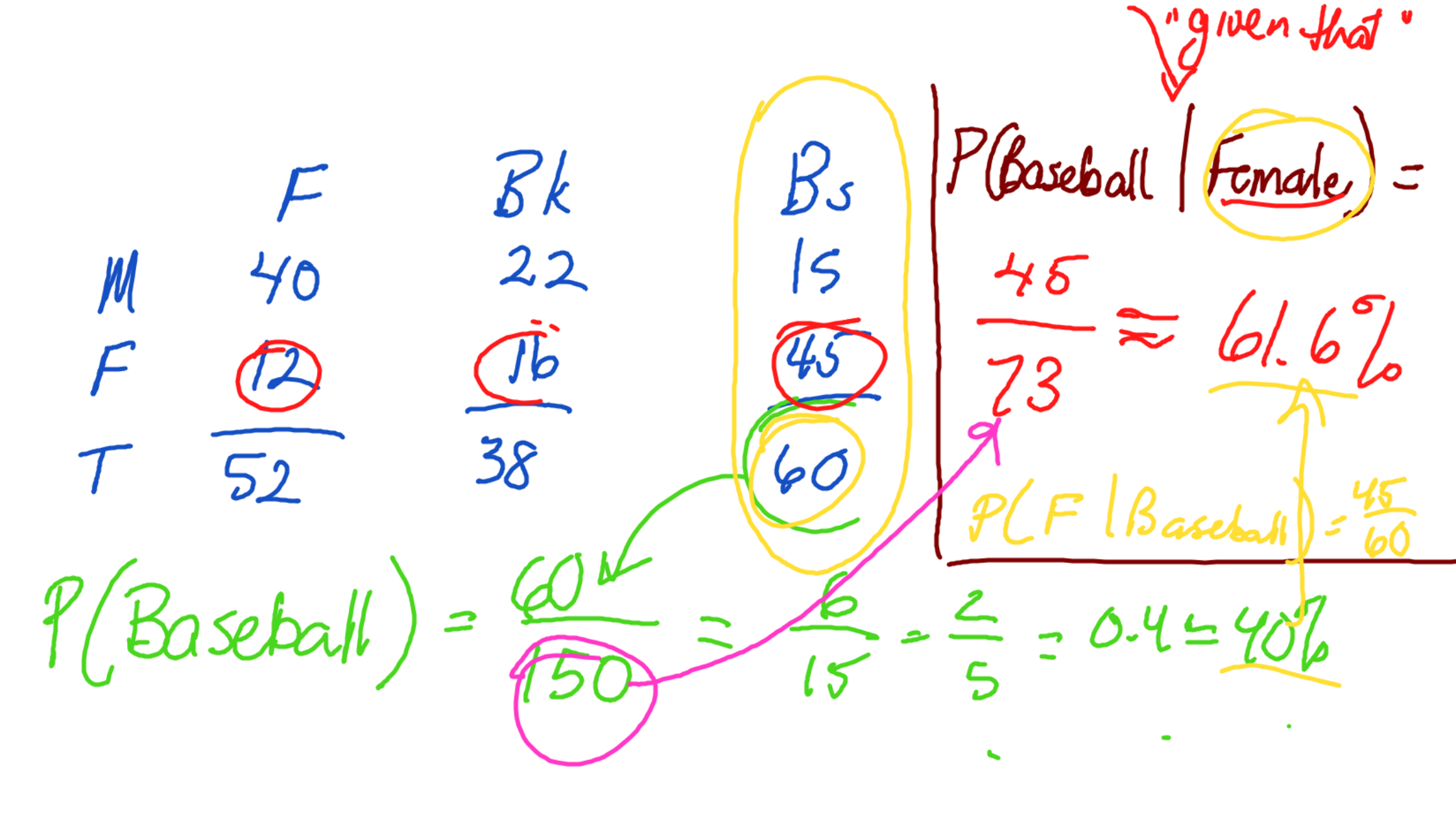
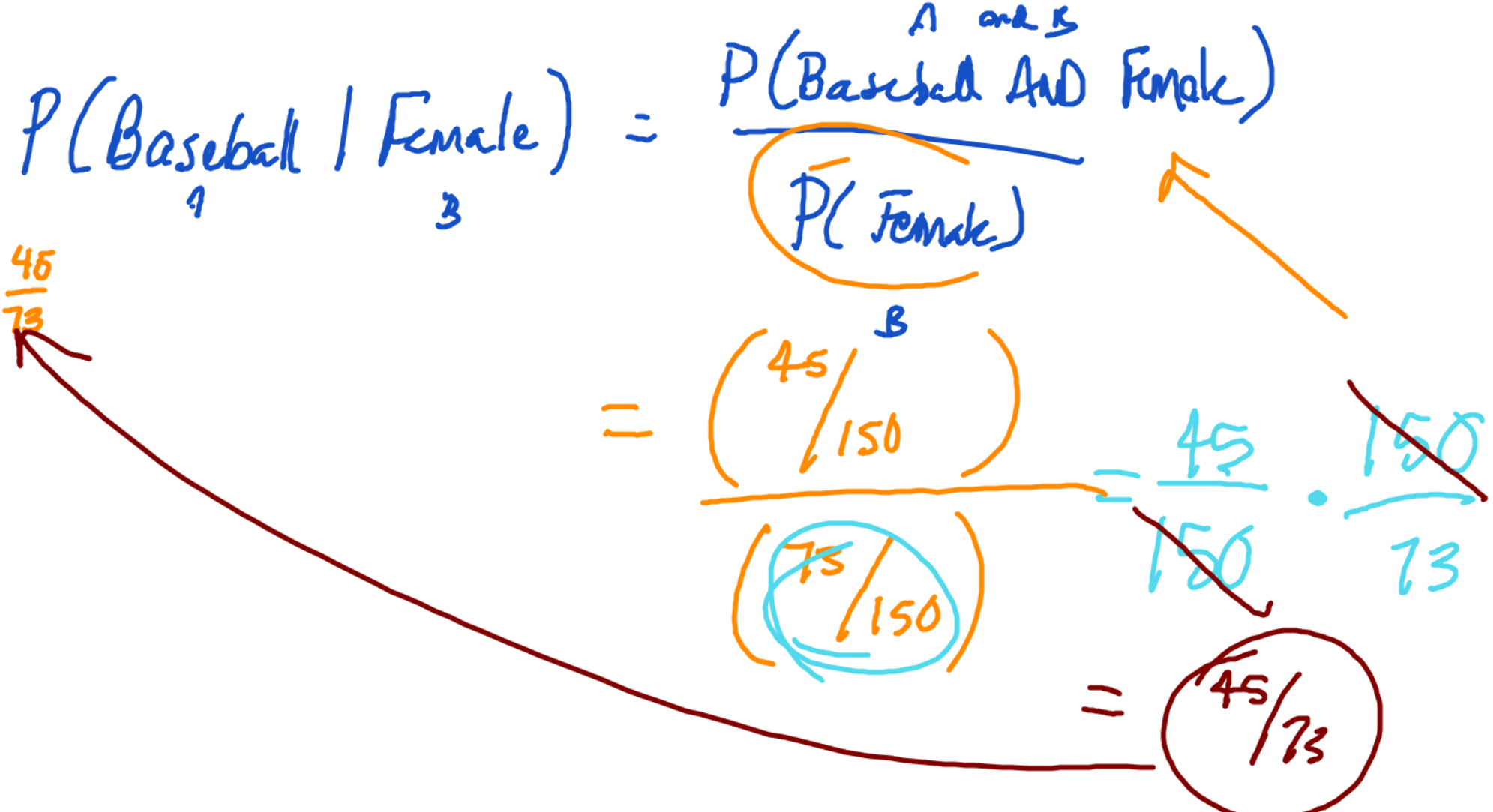
Conditional Probability

Changes the denominator


"given that"
P(Baseball | Female) =
45/73 ≈ 61.6%
P(F | Baseball) = 45/60
F
Bk
Bs
M 40 22 15
F 12 16 45
T 52 38 60
P(Baseball) = 60/150 = 6/15 = 2/5 = 0.4 = 40%


P(Baseball | Female) = P(Baseball AND Female) / P(Female)
A and B
B
= (45/150) / (73/150)
= 45/150 · 150/73
= 45/73
45/73

$$P(A \mid B) = \frac{P(A \text{ and } B)}{P(B)}$$

1) p511 7-9, 14-21

2) Conditional 1 pg 1 only

3) Conditional 2 pg 1 only