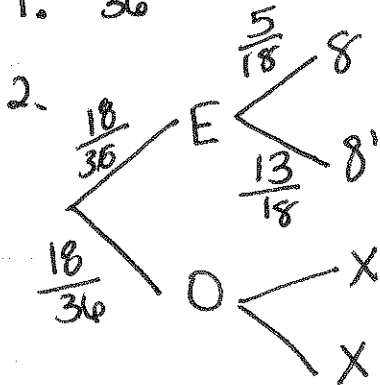


Day 9

1. $\frac{1}{36}$



- 2,6
 - 3,5
 - 4,4
 - 5,3
 - 6,2
- } 5

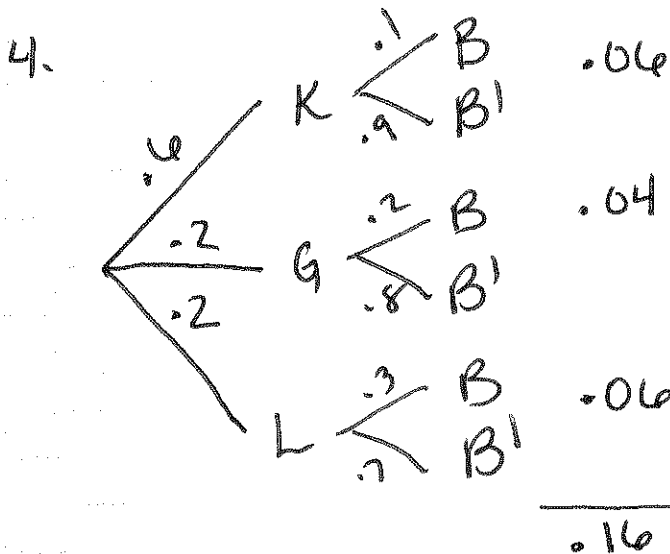
$$P(8|E) = \frac{P(8 \cap E)}{P(E)}$$

$$= \frac{\left(\frac{18}{36} \cdot \frac{5}{18}\right)}{\left(\frac{18}{36}\right)} = \boxed{\frac{5}{18}}$$

3. a) $P(>10|A) = \frac{P(>10 \cap A)}{P(A)} = \frac{\left(\frac{75}{400}\right)}{\left(\frac{200}{400}\right)} = \boxed{\frac{75}{200}}$

b) $P(\leq 10|A) = \frac{P(\leq 10 \cap A)}{P(A)} = \frac{\left(\frac{125}{400}\right)}{\left(\frac{200}{400}\right)} = \boxed{\frac{125}{200}}$

c) $P(C|>10) = \frac{P(C \cap >10)}{P(>10)} = \frac{\left(\frac{150}{400}\right)}{\left(\frac{225}{400}\right)} = \boxed{\frac{150}{225}}$

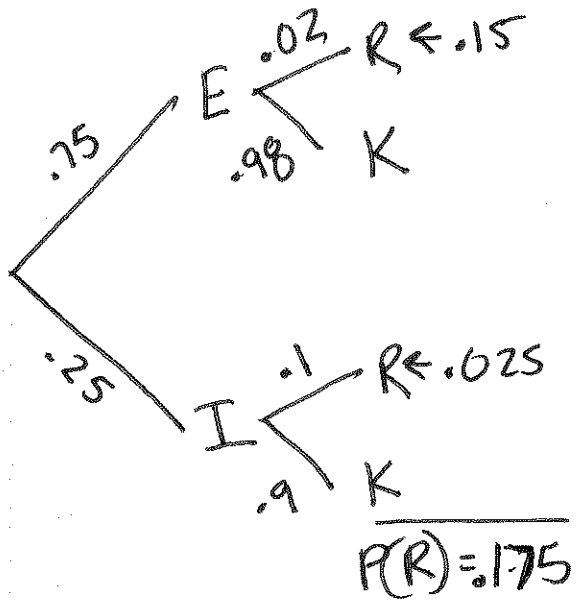


b) $P(B|G) = \frac{0.04}{0.2} = 20\%$
Gail

c) $P(B|L) = \frac{0.06}{0.2} = 30\%$
Larry

a) 16% chance it is bitter

5.

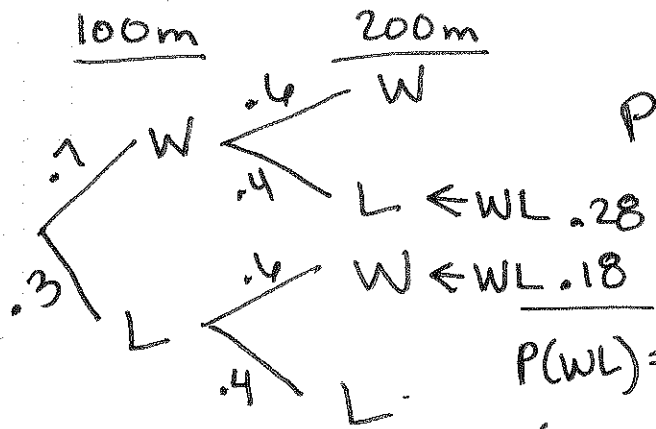


$$P(I|R) = \frac{P(I \cap R)}{P(R)}$$

$$= \frac{0.15}{0.175} = 0.857$$

85.7%
chance the
product was
made by an
inexperienced
employee

6.



$$P(W_{100} | WL)$$

$$P(W_{100} \cap WL) = 0.28$$

$$P(WL) = 0.46$$

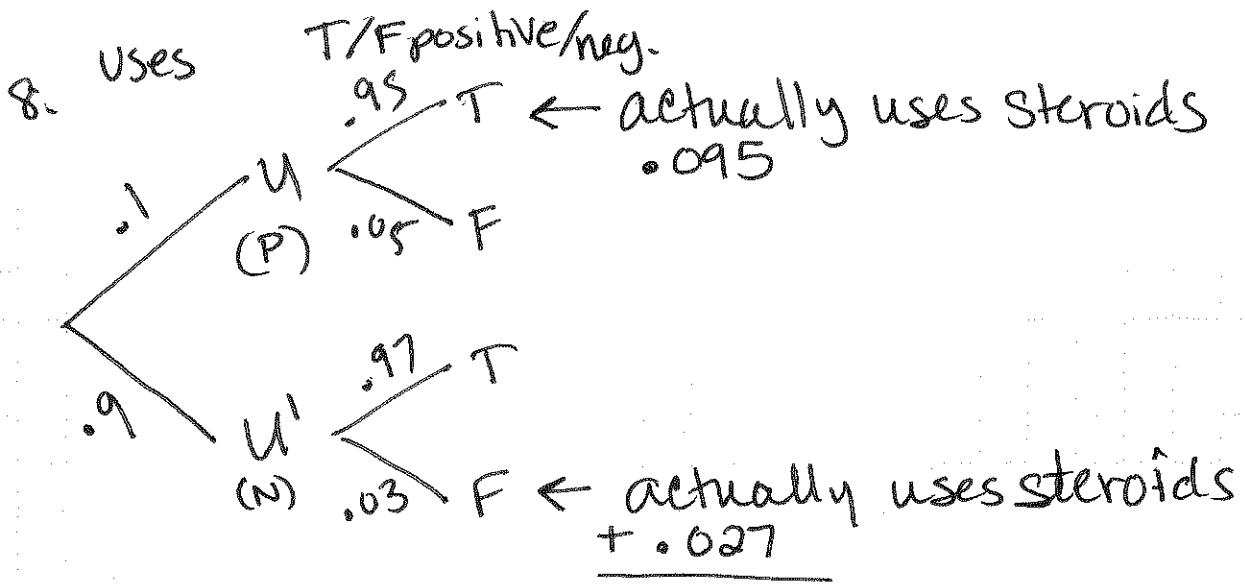
$$P(W_{100} | WL) = \frac{0.28}{0.46} = 0.609$$

60.9%
chance of
winning the 100
and losing the 200.

7. a) $P(M) = \frac{281}{433} = 0.649$ 64.9% chance male

b) $P(CF|M) = \frac{59}{281} = 0.21$ 21% chance that a male was counterfeiting

c) $P(M|CF) = \frac{59}{96} = 0.615$ 61.5% a counterfeiter is male



$$P(\text{Uses}) = .122$$

$$P(U|+) = \frac{P(U \cap +)}{P(+)} = \frac{.095}{.122} = .779$$

77.9% chance,
that if the test reads
positive, the athlete
actually uses