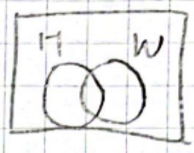
2.66

(a) 32% ✱ (b) 87% ✱ (c) 13% ✱ (d) 37% ✱

2.82

(a) $0.2+0.28-0.15=0.33$ ✱



(b) $\frac{0.15}{0.2}=0.75$ ✱

(c) $\frac{0.05}{0.72}=0.0694$ ✱

2.90

(a) $P(B|A)=\frac{P(A\cap B)}{P(A)} \Rightarrow P(A\cap B)=0.3\times 0.75=0.225$

$P(C|A\cap B)=\frac{P(C\cap A\cap B)}{P(A\cap B)} \Rightarrow P(C\cap A\cap B)=0.225\times 0.2=0.045$

(b)

$P(B'\cap C)=P(A'\cap B'\cap C)+P(A\cap B'\cap C)$

$=P(C|A'\cap B')\times P(A'\cap B')+P(C|A\cap B')\times P(A\cap B')$

$P(A')=0.7$

$P(B|A')=\frac{P(B\cap A')}{P(A')}$, $P(B\cap A')=0.7\times 0.2=0.14$

$P(B'\cap A')=0.7-0.14=0.56$

$P(A\cap B)=0.75\times 0.$

$=0.225$

$P(A\cap B')=0.3-0.22$

$=0.075$

$=0.9\times 0.56+0.8\times 0.075=0.564$

(c)

$P(A'\cap B\cap C)=P(C|A'\cap B)\times P(A'\cap B)=0.15\times 0.14=0.021$

$P(B\cap C)=0.021+0.045=0.066$

$P(C)=P(B\cap C)+P(B'\cap C)=0.066+0.564=0.63$

(d)

$$P(A|C\wedge B') = \frac{P(A\wedge B'\wedge C)}{P(B'\wedge C)} = \frac{0.06}{0.564} = 0.1064$$

2.100

$$P = \frac{5}{7+7+5} = 0.2632$$

2.126

(a) $P = \frac{13}{23} = 0.565$

(b) $P = \frac{2}{40+13+6} = 0.034$