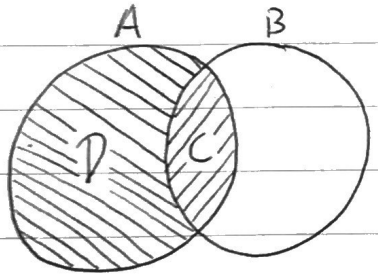
1. a) $n(r \to 8(7 = \frac{8!}{(8-7)!\,7!} = \underline{\underline{8}}$

b) $n(r \to m(7 = \frac{m!}{(m-7)!\,7!}$

c) $n(r \to 12(7 = \frac{12!}{(12-7)!\,7!} = \frac{12 \cdot 11 \cdot 10 \cdot 9 \cdot 8}{5 \cdot 4 \cdot 3 \cdot 2 \cdot 1} = 11 \cdot 9 \cdot 8 = 792$

Pris $= 792 \cdot 3 = \underline{\underline{2376 \text{ kr}}}$

2.



De er disjunkte fordi
$P(C \cup D) = P(C) + P(D)$
Ettersom de er disjunkte er de uavhengige.

3. $P(R \mid E \cup F) = 1$
$P(R) = P(E) + P(F) - P(E \cap F) = 0{,}08$

E og F er ikke disjunkte da de har en skjæring

E og F er avhengige fordi $P(E) \cdot P(F) ! = P(E \cap F)$

3B $P(F) = 0{,}05$

$P(E) = 0{,}05$

$P(E \cap F) = 0{,}02$

$P(E \cup F) = 0{,}08$

$P(V \mid E \cup F) = 0{,}5$

$P(V \mid E \cup F!) = 0{,}07$

$P(V) = P(V \mid E \cup F) \cdot P(E \cup F) + P(V \mid E \cup F!) \cdot P(E \cup F!)$

$= 0{,}5 \cdot 0{,}08 + 0{,}07 \cdot 0{,}92$

$= 0{,}1044$

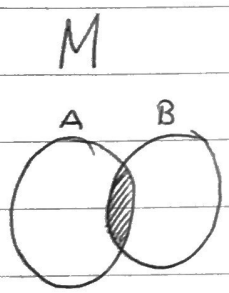
~~$P(V \cup E \cup F)$~~

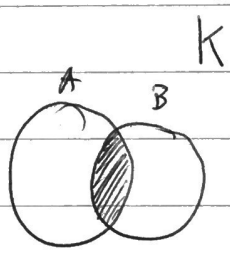
$P(V \cup E \cup F) = P(E \cup F) + P(V) - (P(V \mid E \cup F) \cdot P(E \cup F))$

$= 0{,}08 + 0{,}1044 - (0{,}5 \cdot 0{,}08)$

$= \underline{0{,}1444}$

4a





$P(A) = P(A \cap K) + P(A \cap M) = P(A \mid K) \cdot P(K) + P(A \mid M) \cdot P(M)$

$= 0{,}44 \cdot \frac{418}{632} + 0{,}272 \cdot \frac{214}{632} = \underline{0{,}3831}$

$P(A \cap K) = 0{,}44 \cdot \frac{418}{632} = \underline{0{,}2910}$

4B $P(K|A) = \frac{P(A|K) \cdot P(K)}{P(A)} = \frac{0{,}44 \cdot \frac{418}{632}}{0{,}3831} = \underline{0{,}7596}$

$P(A|B) = P(A|B|K) \cdot P(K) + P(A|B|M) \cdot P(M)$

$= \frac{P(A \cap B|K)}{P(B|K)} \cdot P(K) + \frac{P(A \cap B|M)}{P(B|K)} \cdot P(M)$

$= \frac{P(A \cap B|K) \cdot P(K)}{P(A^* \cap B|K) + P(A \cap B|K)} + \frac{P(A \cap B|M) \cdot P(M)}{P(A^* \cap B|M) + P(A \cap B|M)}$

$= \frac{(29{,}2\,\%) \cdot \frac{418}{632}}{(14{,}8\,\%) + (29{,}2\,\%)} + \frac{(21{,}6\,\%) \cdot \frac{214}{632}}{(21{,}6\,\%) + (5{,}6\,\%)}$

$= \underline{0{,}6950}$