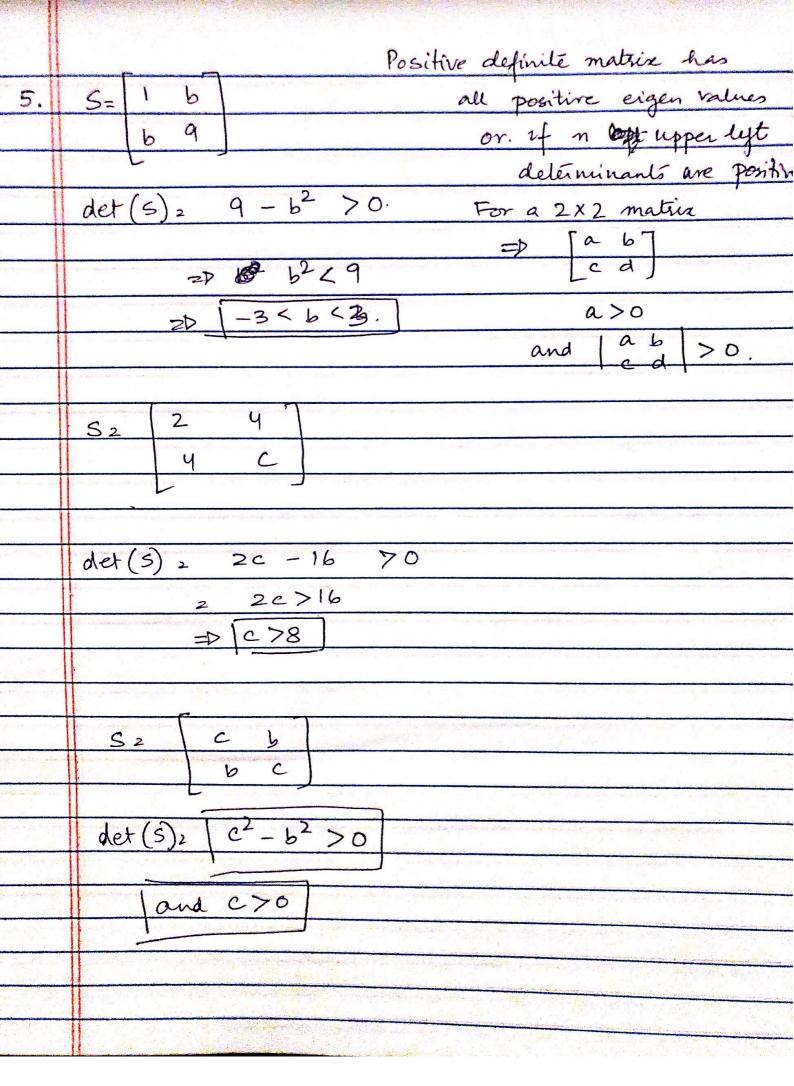
1.
$$P(losing)$$
 the funding = $(0.3) \times (0.3) \times (0.3) = 0.027$

2. $\begin{pmatrix} 1 & -1 & 1 \\ -1 & 0 & 2 \end{pmatrix}$ $C = \begin{pmatrix} \frac{1}{15} & -\frac{1}{15} & \frac{1}{15} & \frac{1}{1$



EC let H = has HIV Dz Drug user R: test is positive Nº test is negative P(H) = 550000 = 0.0022 P(R|H)= 0.99 1200000 P(N) not H) 20.99 $\frac{P(H|R) = P(R|H) \times P(H)}{P(R)}$ P(R) = P(R|H) x P(H) + P(R|not H) x P(not H) = 0.002178 + 0.009978 = 0.012156= P(HIR)= 0.18 P(H|R and D) = ?P(HandD) = 275000 = 0.001) P(not H and D) = (10 mil - 275000) - 0.0389 & lets assume P(R/H) = P(R/H and D) = 0.99 and P(N | not H and D) 20.99 P(RandD) = 0.99 × 0.0011 + 0.01 × 0.0389 = 0.001478

P(H|R and D) 2 P(Hand Rand D)/P(R and D)

= P(RIH and D) x P(Hand D) = 0.99 x 0.0011 = 20.74 P(Rand D)