**LD 1**

1) Baseado nos dados abaixo

**a) Estime os valores de LD nas seguintes situações:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Locus | Allele | freq  | haplotype | freq |
| 1 | A | 0.50 | AC | 0.45 |
|  | T | 0.50 | AG | 0.05 |
| 2 | C | 0.50 | TC | 0.02 |
|  | G | 0.50 | TG | 0.48 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Locus | Allele | freq  | haplotype | freq |
| 1 | A | 0.50 | AC | 0.05 |
|  | T | 0.50 | AG | 0.45 |
| 2 | C | 0.50 | TC | 0.48 |
|  | G | 0.50 | TG | 0.02 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Locus | Allele | freq  | haplotype | freq |
| 1 | A | 0.50 | AC | 0.25 |
|  | T | 0.50 | AG | 0.25 |
| 2 | C | 0.50 | TC | 0.25 |
|  | G | 0.50 | TG | 0.25 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Locus | Allele | freq  | haplotype | freq |
| 1 | A | 0.90 | AC | 0.45 |
|  | T | 0.10 | AG | 0.05 |
| 2 | C | 0.60 | TC | 0.00 |
|  | G | 0.40 | TG | 0.50 |

Quais a diferenças entre as estimativas D e r$2$?