**LD 1**

1) Baseado nos dados abaixo

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

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

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

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

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

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