

BIOINFORMATICS EXERCISES

11/03/22

EXERCISE 1

$$G = 5 \text{ Нб}$$

reads so that we have 95% cov.?

$L = 200 \text{ bp}$ $K = 200 \text{ bp}$

$$P(x > 0) = 1 - e^{-\lambda} = 0,95 \quad \lambda = \frac{n_b}{G} \cdot \frac{v \cdot L}{G} = \frac{N \cdot 200}{5 \cdot 10^6}$$

$$\hookrightarrow 1 - e^{-\frac{N \cdot 200}{8 \cdot 10^6}} = 0,95 \quad \frac{200 N}{8 \cdot 10^6} = 2,95 \quad N = \frac{2,95 \cdot 8 \cdot 10^6}{200} = 74750$$

EXERCISE 3

AC GT TA CG TA GG TT CA GT AT C

AC GT \

C G T T \

GT TA \

T T A C \

T	A	C	G	\
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A C G T \

CG T A \

G T A G

TA	GG	✓
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A G G T \

GG TT \

GTT C

TT	CA	✓
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T C A G

CA GT

A G T A

GT A T \

T A T C \

