

[Simple Scoring Scheme] Example 2

Seq. 1: GAT

Seq. 2: GCAAT

Match: +8 ($w(a, b) = 8$, if $a = b$)

Mismatch: -5 ($w(a, b) = -5$, if $a \neq b$)

Each gap symbol: -3 ($w(-, b) = w(a, -) = -3$)

Kun-Yao Chao
2016/10/17

S

		G	C	A	A	T
	0	-3	-6	-9	-12	-15
G	-3	8	5	2	-1	-4
A	-6	5	3	13	10	7
T	-9	2	0	10	8	18

8 2022/10/4

G - A - T
G C A A T

G - - A T
G C A A T

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[Affine Gap Penalties] Example 2

Seq. 1: GAT

Seq. 2: GCAAT

Match: +8 ($w(a, b) = 8$, if $a = b$)

Mismatch: -5 ($w(a, b) = -5$, if $a \neq b$)

Each gap symbol: -3 ($w(-, b) = w(a, -) = -3$)

Each gap is charged an extra gap-open penalty: -4

D

		G	C	A	A	T
	-4	$-\infty$	$-\infty$	$-\infty$	$-\infty$	$-\infty$
G	-7	-14	-17	-20	-23	-26
A	-10	1	-6	-9	-12	-15
T	-13	-2	-4	2	-1	-6

-12 } Thank 王同学's corrections.
-8 } 2017/10/24

I

		G	C	A	A	T
	-4	-7	-10	<u>3</u> -13	-16	-19
G	$-\infty$	-14	<u>1</u>	<u>-2</u>	-5	-8
A	$-\infty$	-17	-6	-4	2	-1
T	$-\infty$	-20	-9	-11	-5	-3

S

		G	C	A	A	T
	<u>0</u>	<u>5</u> -7	-10	-13	-16	-19
G	-7	<u>8</u>	1	<u>-2</u>	<u>5</u>	-8
A	-10	1	3	9	6	<u>1</u>
T	-13	-2	-4	2	4	<u>14</u>

⑤ ④ ③ ② ①
G - - A T
G C A A T