

(a)

Match: +2
Mismatch: -1
Gap: -2

Global

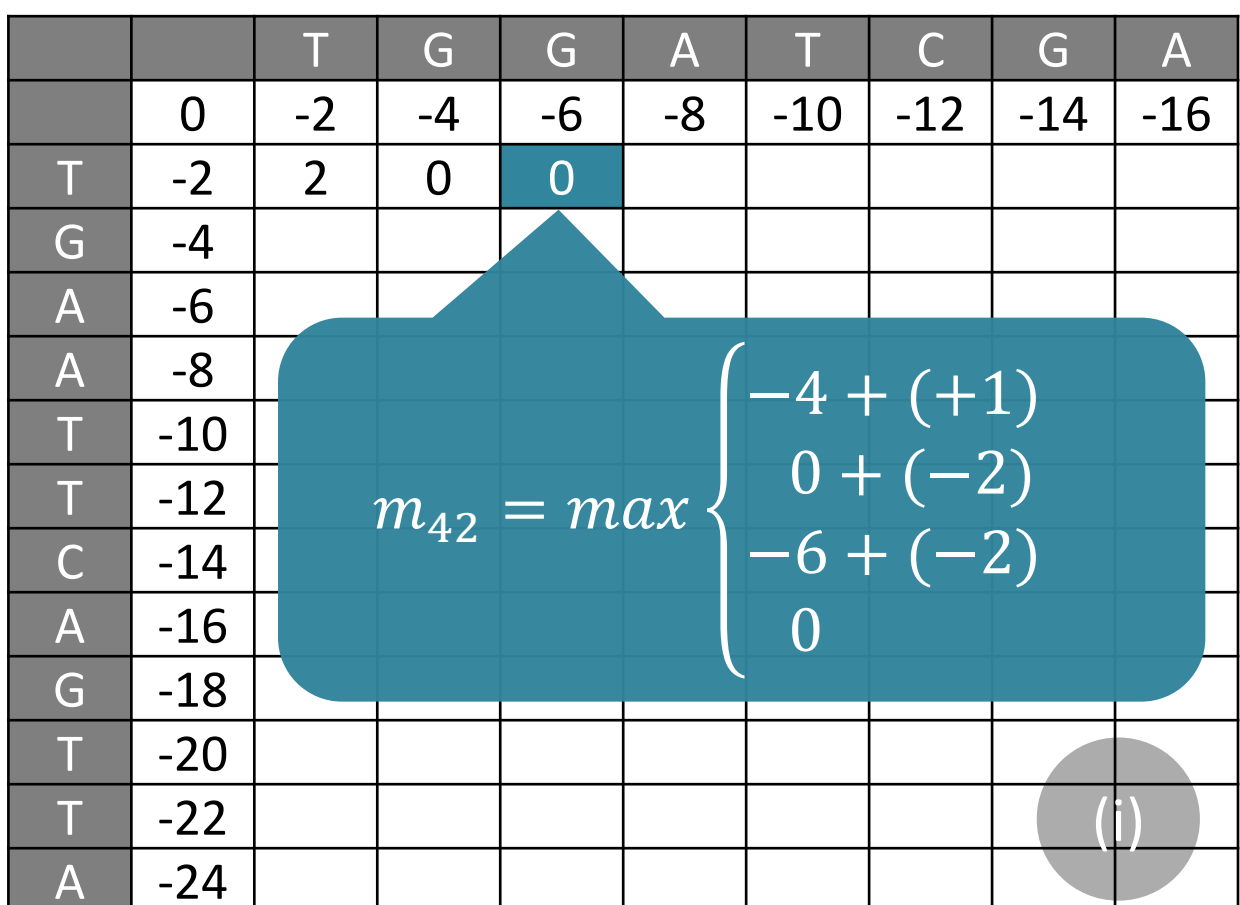
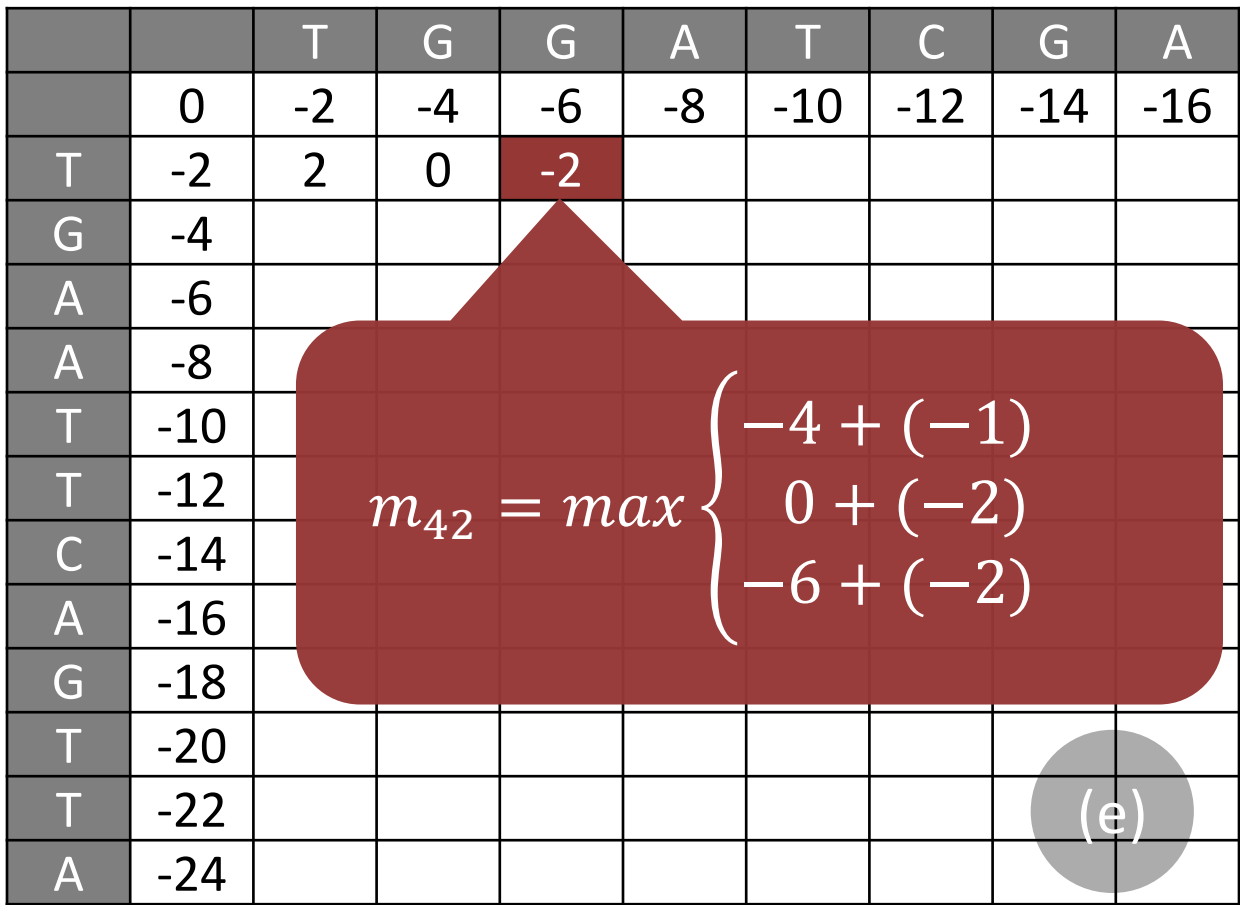
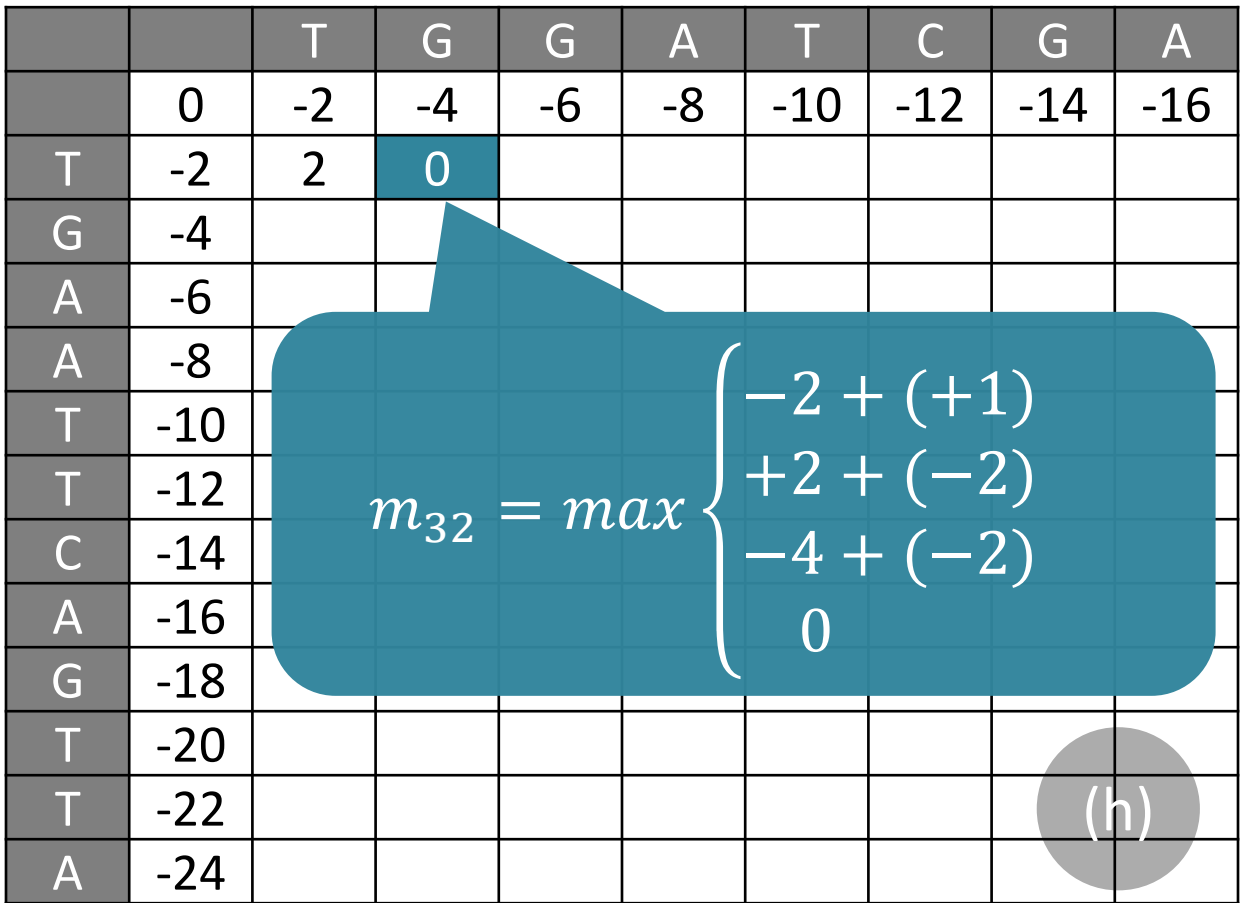
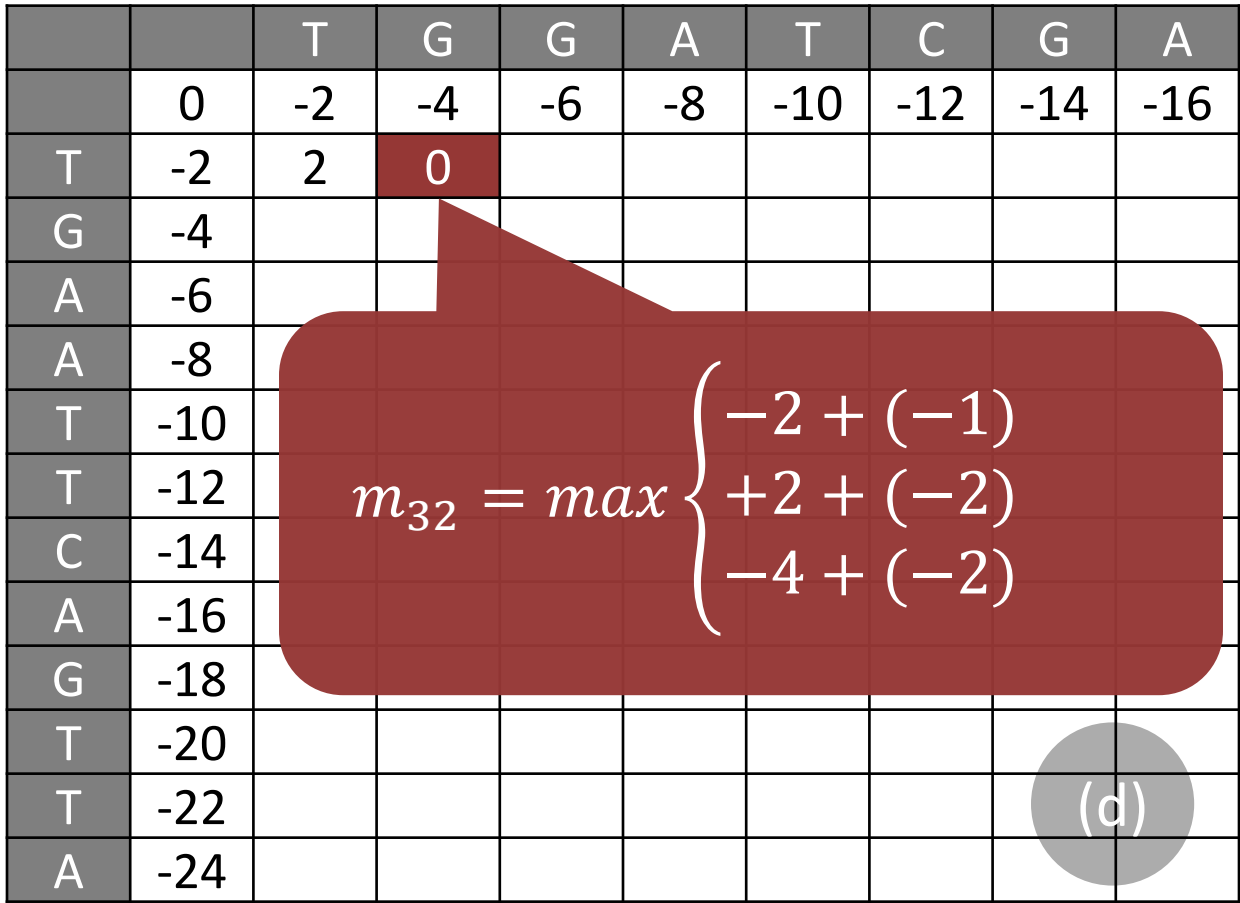
$$m_{ij} = \max \begin{cases} m_{i-1,j-1} + f(s0_i, s1_j) \\ m_{i-1,j} + gap \\ m_{i,j-1} + gap \end{cases}$$

(b)

Local

$$m_{ij} = \max \begin{cases} m_{i-1,j-1} + f(s0_i, s1_j) \\ m_{i-1,j} + gap \\ m_{i,j-1} + gap \\ 0 \end{cases}$$

(f)



Nested loop

```
for(var i=0; i<=n_0; i++) {
  outer loop
    for(var j=0; j<=n_1; j++) {
      inner loop
    }
}
```

Nested loop

```
for(var i=0; i<=n_0; i++) {
  for(var j=0; j<=n_1; j++) {
  }
}
```

Two nested loops

(j)

Initialization of the score matrix

Initialization of the score matrix. (a) Shows the values of the parameters used in the experiments from this chapter. (b) Shows the main expressions that compete in the maximization function in the case of global alignment. (c, d, e) Shows the first three steps in the score matrix initialisation for global alignment. (f) Show the expressions that compete in the maximization function in case of local alignment. (g, h, i) Shows the first three steps in the score matrix initialisation for local alignment. (j) Shows what a nested loop means.



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