

*Problem instance:*

S<sub>1</sub> CACAGG  
S<sub>2</sub> CACAAG  
CACAGG  
S<sub>3</sub> CCCAGG  
S<sub>4</sub> AACAGG  
S<sub>5</sub> CACAGA

*Center string:*

**CACAGG**

*Position weight matrix:*

|            |   | Position |     |   |   |     |     |
|------------|---|----------|-----|---|---|-----|-----|
|            |   | 1        | 2   | 3 | 4 | 5   | 6   |
| Nucleotide | A | 1/6      | 5/6 | 0 | 1 | 1/6 | 1/6 |
|            | C | 5/6      | 1/6 | 1 | 0 | 0   | 0   |
|            | G | 0        | 0   | 0 | 0 | 5/6 | 5/6 |
|            | T | 0        | 0   | 0 | 0 | 0   | 0   |