

Let's follow the  $5' \rightarrow 3'$  direction of DNA and walk along the chromosome from *terC* to *oriC* (along a reverse half-strand) and continue on from *oriC* to *terC* (along a forward half-strand). In our previous discussion, we saw the skew is decreasing along the reverse half-strand and increasing along the forward half-strand. Thus, skew should achieve a minimum at the position where the reverse half-strand ends and the forward half-strand begins, which is exactly the location of *oriC*!

We have just developed an insight for a new algorithm for locating *oriC*: it should be found where the skew attains a minimum:

**Minimum Skew Problem:** *Find a position in a genome minimizing the skew.*

**Input:** A DNA string *Genome*.

**Output:** All integer(s)  $i$  minimizing  $\text{Skew}(\text{Prefix}_i(\text{Text}))$  among all values of  $i$  (from 0 to  $|\text{Genome}|$ ).

**CODE CHALLENGE:** Solve the Minimum Skew Problem.

**Sample Input:**

**TAAAGACTGCCGAGAGGCCAACACGAGTGCTAGAACGAGGGGCGTAAACGCGGGTCCGAT**

**Sample Output:**

**11 24**