

2014 EYE OF THE BEHOLDER (PART 2)

Test Subject: I-65967423
Observation: FR-8/41
Beholder-6 observing

I-65967423 continues to interact with toy blocks. Plenty of blocks have been made available to subject, each showing a letter from *A* to *Z*. In accordance with protocol, blocks showing the same letter are otherwise indistinguishable.

Observation period FR-8/41 began with blocks selected and placed in a row forming the word *BDABCCDBAD*. Subject removed four letters leaving a palindrome *BDABCCDBA*. Subject became agitated at this point, knocking blocks aside, before reforming the word *BDABCCDBAD* and removing two letters to form a new palindrome *BDABCCDBA*.

During each observation period FR-8/41-2 through FR-8/41-66, subject repeated selection and placement of blocks followed by block removals. In all periods the smallest number of blocks were removed to leave a palindrome.

Conclusion: Unresolved. Additional observation required.

SAMPLE INPUT

BDABCCDBAD

Write a program that reads in a string *b* of *n* uppercase letters ($3 \leq n \leq 2^{10}$). You should output a single integer, the minimum number of blocks that can be removed from *b* to leave a palindrome.

SAMPLE OUTPUT

2