

Team Notebook

BBC

1 Z-функция

```
vector<int> calc_z (const char * s){
    vector<int> z;
    int len = strlen(s);
    z.resize (len);
    z[0] = len;
    int l = 0, r = 0;
    int j;
    for (int i = 1; i < len; i++)
        if (i > r){
            for (j = 0; ((j + i) < len) && (s[i + j] == s[j]) ; j++);
            z[i] = j;
            l = i;
            r = i + j - 1;
        }
        else if (z[i - l] < r - i + 1)
            z[i] = z[i - l];
        else{
            for (j = 1; (s[r + j] == s[r - i + j]) && ((j+r) < len); j++);
            z[i] = r - i + j;
            l = i;
            r = r + j - 1;
        }
    return z;
}
```