Drawing Book ★

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Problem   Submissions   Leaderboard   Editorial 🔒

A teacher asks the class to open their books to a page number. A student can either start turning pages from the front of the book or from the back of the book. They always turn pages one at a time. When they open the book, page **1** is always on the right side:

When they flip page **1**, they see pages **2** and **3**. Each page except the last page will always be printed on both sides. The last page may only be printed on the front, given the length of the book. If the book is n pages long, and a student wants to turn to page p, what is the minimum number of pages to turn? They can start at the beginning or the end of the book.

Given n and p, find and print the minimum number of pages that must be turned in order to arrive at page p.

Example

$n = 5$

$p = 3$
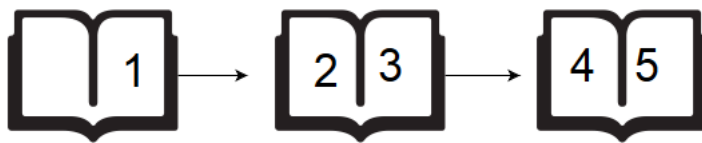
Using the diagram above, if the student wants to get to page **3**, they open the book to page **1**, flip **1** page and they are on the correct page. If they open the book to the last page, page **5**, they turn **1** page and are at the correct page. Return **1**.

Function Description

Complete the pageCount function in the editor below.

pageCount has the following parameter(s):

- int n: the number of pages in the book
- int p: the page number to turn to

Returns

- int: the minimum number of pages to turn

Input Format

The first line contains an integer n, the number of pages in the book.

The second line contains an integer, p, the page to turn to.

Constraints
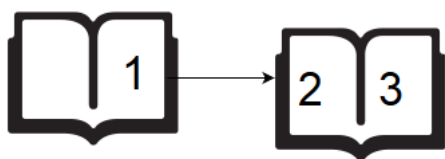
- $1 \le n \le 10^5$
- $1 \le p \le n$

Sample Input 0

```
6
2
```
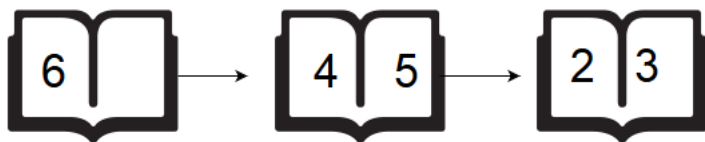
Sample Output 0

```
1
```

Explanation 0

If the student starts turning from page **1**, they only need to turn **1** page:

If a student starts turning from page **6**, they need to turn **2** pages:

Return the minimum value, **1**.
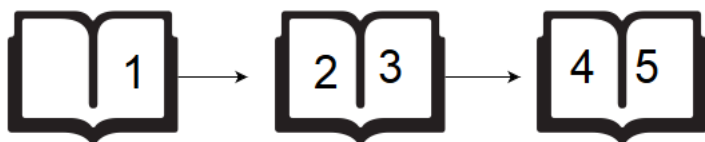
Sample Input 1

```
5
4
```
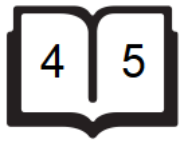
Sample Output 1

```
0
```

Explanation 1

If the student starts turning from page **1**, they need to turn **2** pages:

If they start turning from page **5**, they do not need to turn any pages:

Return the minimum value, **0**.

Change Theme   Language   Python 3 ⌄   ↺   ⛶   ⋮

```python
 4    import os
 5    import random
 6    import re
 7    import sys
 8
 9    #
10    # Complete the 'pageCount' function below.
11    #
12    # The function is expected to return an INTEGER.
13    # The function accepts following parameters:
14    #  1. INTEGER n
15    #  2. INTEGER p
16    #
17
18    def pageCount(n, p):
19        # Write your code here
20        front_turn = math.ceil((p - 1) / 2)
21        if n % 2:  # odd
22            back_turn = math.floor((n - p) / 2)
23        else:
24            back_turn = math.ceil((n - p) / 2)
25        return min(front_turn, back_turn)
26
27    if __name__ == '__main__':
28        fptr = open(os.environ['OUTPUT_PATH'], 'w')
29
30        n = int(input().strip())
31
32        p = int(input().strip())
33
34        result = pageCount(n, p)
35
36        fptr.write(str(result) + '\n')
37
```

EMACS   Line: 26 Col: 5

⤒ Upload Code as File   ☐ Test against custom input   Run Code   Submit Code

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55%   680.2/850

Congratulations

You solved this challenge. Would you like to challenge your friends?

Next Challenge

✓ **Test case 0**

✓ Test case 1

✓ Test case 2 🔒

✓ Test case 3 🔒

✓ Test case 4 🔒

✓ Test case 5 🔒

✓ Test case 6 🔒

Compiler Message

Success

Input (stdin)   Download

1   **6**
2   **2**

Expected Output   Download

1   **1**