

1. Consider the following code. What sum does it generate?

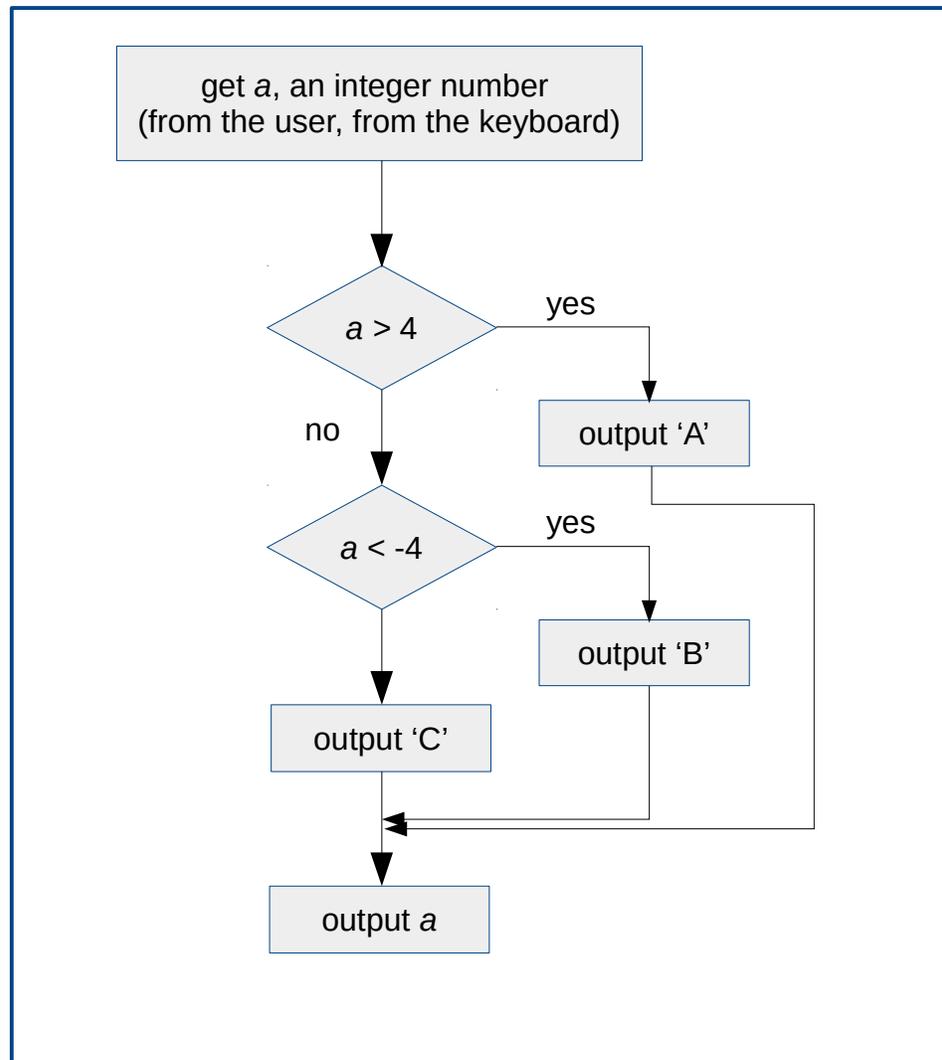
```
n = int(input("Enter a positive integer:"))  
s = 0  
for i in range(0,n):  
    s = s + ((-1)**i)/(i+1)  
print(s)
```

Answer:

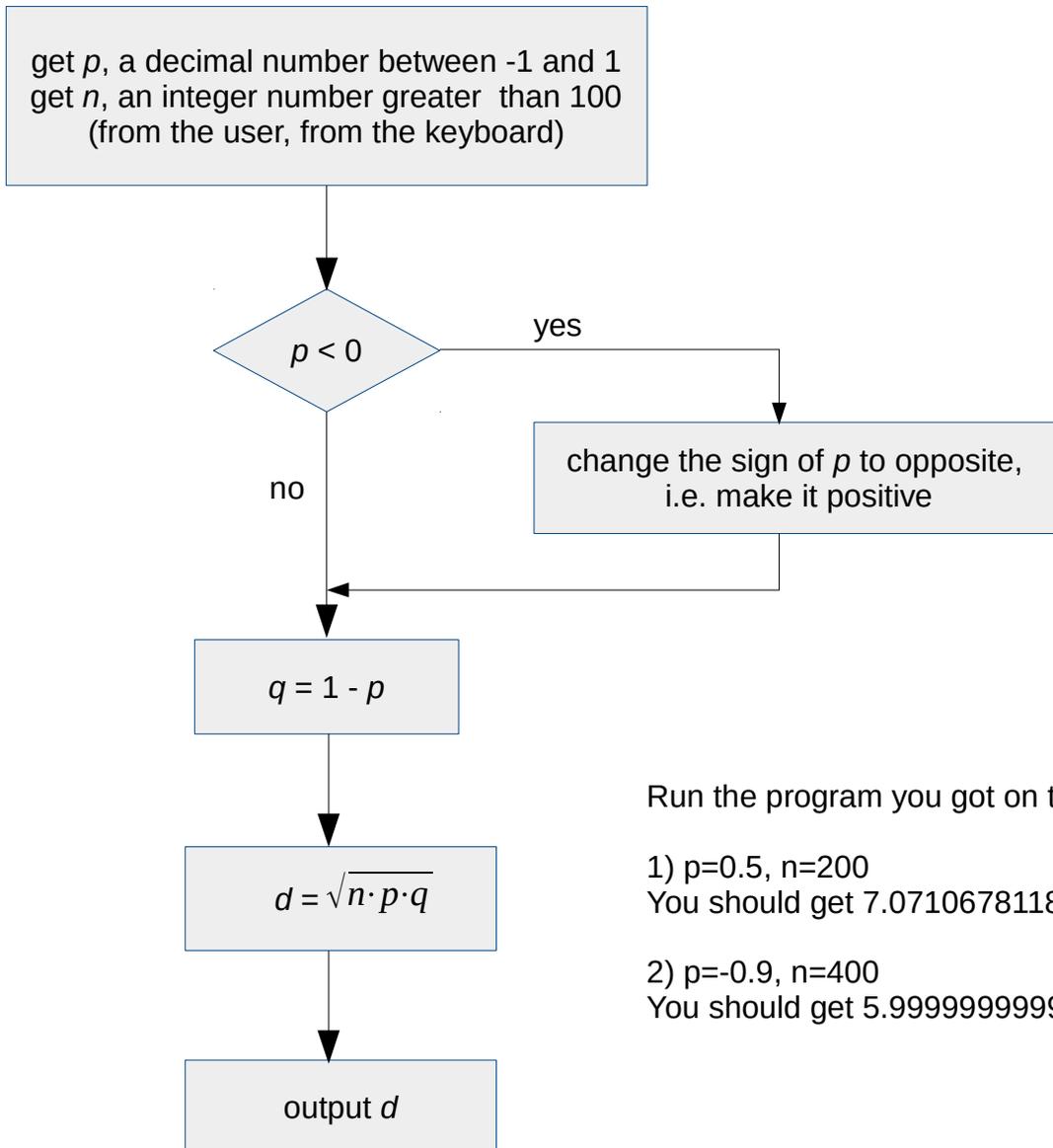
$$1 - \frac{1}{2} + \frac{1}{3} - \frac{1}{4} + \frac{1}{5} - \frac{1}{6} + \frac{1}{7} - \dots$$

2. for the following program, draw the *flowchart* corresponding to it

```
a = int(input("Enter an integer:"))  
if a > 4:  
    print("A")  
elif a < -4:  
    print("B")  
else:  
    print("C")  
print(a)
```



3. Given the flowchart, write the program.



Run the program you got on two inputs:

1)  $p=0.5$ ,  $n=200$   
You should get 7.0710678118654755

2)  $p=-0.9$ ,  $n=400$   
You should get 5.9999999999999999

**Answer:**

```
import math
p = float(input("Enter a decimal number between -1 and 1:"))
n = int(input("Enter an integer number greater than 100:"))

if p < 0:
    p = abs(p)

q = 1-p
d = math.sqrt(n*p*q)
print(d)
```