


Congratulations


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✓ Test case 0


✓ Test case 1

✓ Test case 2 

✓ Test case 3 

✓ Test case 4 

✓ Test case 5 

✓ Test case 6 

Success

Input (stdin)

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| | |
|---|-----|
| 1 | 2 1 |
| 2 | 5 6 |

Expected Output

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| | |
|---|-------------|
| 1 | 7.00+7.00i |
| 2 | -3.00-5.00i |
| 3 | 4.00+17.00i |
| 4 | 0.26-0.11i |
| 5 | 2.24+0.00i |

```
1  import math
2
3
4  class Complex(object):
5      def __init__(self, real, imaginary):
6          self.real = real
7          self.imaginary = imaginary
8
9      def __add__(self, no):
10         real = self.real + no.real
11         imaginary = self.imaginary + no.imaginary
12         return Complex(real, imaginary)
13
14     def __sub__(self, no):
15         real = self.real - no.real
16         imaginary = self.imaginary - no.imaginary
17         return Complex(real, imaginary)
18
19     def __mul__(self, no):
20         real = self.real * no.real - self.imaginary * no.imaginary
21         imaginary = self.real * no.imaginary + self.imaginary * no.real
22         return Complex(real, imaginary)
23
24     def __truediv__(self, no):
25         x = float(no.real ** 2 + no.imaginary ** 2)
26         y = self * Complex(no.real, -no.imaginary)
27         real = y.real / x
28         imaginary = y.imaginary / x
29         return Complex(real, imaginary)
```

```
26     y = self * Complex(no.real, -no.imaginary)
27     real = y.real / x
28     imaginary = y.imaginary / x
29     return Complex(real, imaginary)
30
31     def mod(self):
32         real = math.sqrt(self.real ** 2 + self.imaginary ** 2)
33         return Complex(real, 0)
34
35     def __str__(self):
36         if self.imaginary == 0:
37             result = "%.2f+0.00i" % (self.real)
38         elif self.real == 0:
39             if self.imaginary >= 0:
40                 result = "0.00+%.2fi" % (self.imaginary)
41             else:
42                 result = "0.00-%.2fi" % (abs(self.imaginary))
43         elif self.imaginary > 0:
44             result = "%.2f+%.2fi" % (self.real, self.imaginary)
45         else:
46             result = "%.2f-%.2fi" % (self.real, abs(self.imaginary))
47         return result
48
49     if __name__ == '__main__':
50         c = map(float, input().split())
51         d = map(float, input().split())
52         x = Complex(*c)
53         y = Complex(*d)
54         print(*map(str, [x+y, x-y, x*y, x/y, x.mod(), y.mod()]), sep='\n')
```