main.py

```python
import numpy as np
np.seterr(divide='ignore')
def roots(f,a,b):
    if f(b)*f(a)>=0:
        print("Not a valid interval, try again!")
        return
    while abs(b-a) >= 0.0000000001:
        m = (a+b)/2
        if f(m)*f(a) <0:
            b = m
        else:
            a = m
    return round((a+b)/2,10)

f=lambda x:np.exp(x)+np.log(x)
a=float(input("a= "))
b=float(input("b= "))
print(roots(f,a,b))
```

Shell

```
a= 0
b= 1
0.2698741376
>
```

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```python
import numpy as np
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def roots(f,a,b):
    if f(b)*f(a)>=0:
        print("Not a valid interval, try again!")
        return
    while abs(b-a) >= 0.0000000001:
        m = (a+b)/2
        if f(m)*f(a) <0:
            b = m
        else:
            a = m
    return round((a+b)/2,10)

f=lambda x:np.arctan(x)-(x**2)
a=float(input("a= "))
b=float(input("b= "))
print(roots(f,a,b))
```

Shell

```
a= 0
b= 2
Not a valid interval, try again!
None
>
```

main.py

```python
import numpy as np
np.seterr(divide='ignore')
def roots(f,a,b):
    if f(b)*f(a)>=0:
        print("Not a valid interval, try again!")
    while abs(b-a) >= 0.0000000001:
        m = (a+b)/2
        if f(m)*f(a) <0:
            b = m
        else:
            a = m
    return round((a+b)/2,10)

f=lambda x:np.sin(x)/np.log(x)
a=float(input("a= "))
b=float(input("b= "))
print(roots(f,a,b))
```

Shell

```
a= 3
b= 4
3.1415926536
>
```

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```python
import numpy as np
np.seterr(divide='ignore')
def roots(f,a,b):
    if f(b)*f(a)>=0:
        print("Not a valid interval, try again!")
        return
    while abs(b-a) >= 0.0000000001:
        m = (a+b)/2
        if f(m)*f(a) <0:
            b = m
        else:
            a = m
    return round((a+b)/2,10)

f=lambda x:np.log(np.cos(x))
a=float(input("a= "))
b=float(input("b= "))
print(roots(f,a,b))
```

Shell

```
a= 5
b= 7
Not a valid interval, try again!
None
>
```