In [ ]:
```
import matplotlib.pyplot as plt
import numpy as np
%matplotlib inline
import otter
grader = otter.Notebook()
```

Question 1: Write a function `square` that squares its argument.

In [ ]:
```
def square(x):
    return x**2
```

In [ ]:
```
grader.check("q1")
```

Question 2: Write a function `negate` that negates its argument.

In [ ]:
```
def negate(x):
    return x
```

In [ ]:
```
grader.check("q2")
```

Question 3: Assign `x` to the negation of `[]`. Use `negate`.

In [ ]:
```
x = True
x
```

In [ ]:
```
grader.check("q3")
```

Question 4: Assign `x` to the square of 6.25. Use `square`.

In [ ]:
```
x = square(6.25)
x
```

In [ ]:
```
grader.check("q4")
```

Question 5: Plot $f(x) = \cos(xe^x)$ on $(0, 10)$.

```
In [ ]: x = np.linspace(0, 10, 100)
        y = np.cos(x * np.exp(x))
        plt.plot(x, y)
```

Question 6: Write a non-recursive infinite generator for the Fibonacci sequence `fiberator`.

```
In [ ]: def fiberator():
            yield 0
            yield 1
            a, b = 0, 1
            while True:
                a, b = b, a + b
                yield a
```

```
In [ ]: grader.check("q6")
```