

## 05 Python Graduate - Tic-Tac-Toe Outcome

Create a Python program that takes a given Tic-Tac-Toe state as its only (positional) argument and reports if X or O has won or if there is no winner. The state should only contain the characters “.”, “O”, and “X”, and must be exactly 9 characters long. If there is not exactly one argument, print a “usage” statement.

### Expected Behavior

```
$ ./outcome.py
Usage: outcome.py STATE
$ ./outcome.py ..X.OA..X
State "..X.OA..X" must be 9 characters of only ., X, O
$ ./outcome.py ..X.OX...
No winner
$ ./outcome.py ..X.OX..X
X has won
```

### Test Suite

A passing test suite looks like this:

```
$ make test
python3 -m pytest -v test.py
===== test session starts =====
platform darwin -- Python 3.6.8, pytest-4.2.0, py-1.7.0, pluggy-0.8.1 -- /anaconda3/bin/python
cachedir: .pytest_cache
rootdir: /Users/kyclark/work/worked_examples/05-python-tictactoe, inifile:
plugins: remotedata-0.3.1, openfiles-0.3.2, doctestplus-0.2.0, arraydiff-0.3
collected 3 items

test.py::test_outcome_usage PASSED [ 33%]
test.py::test_outcome_bad_input PASSED [ 66%]
test.py::test_outcome PASSED [100%]

===== 3 passed in 1.20 seconds =====
```