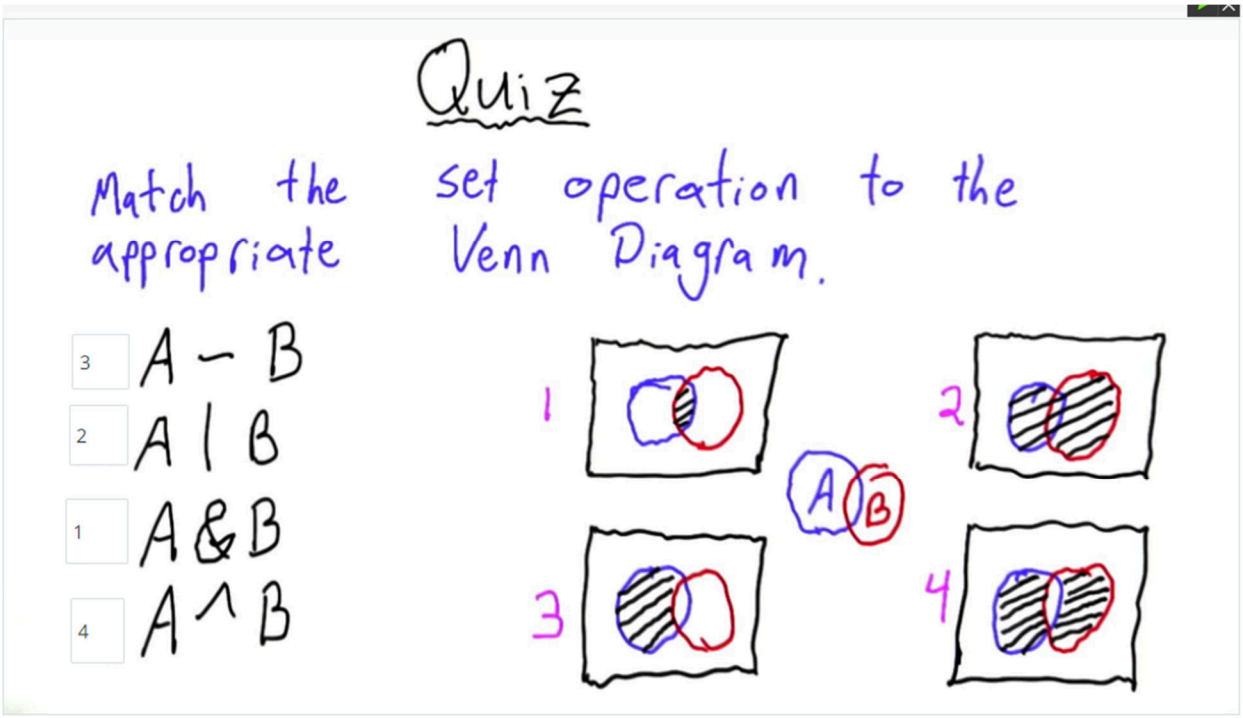
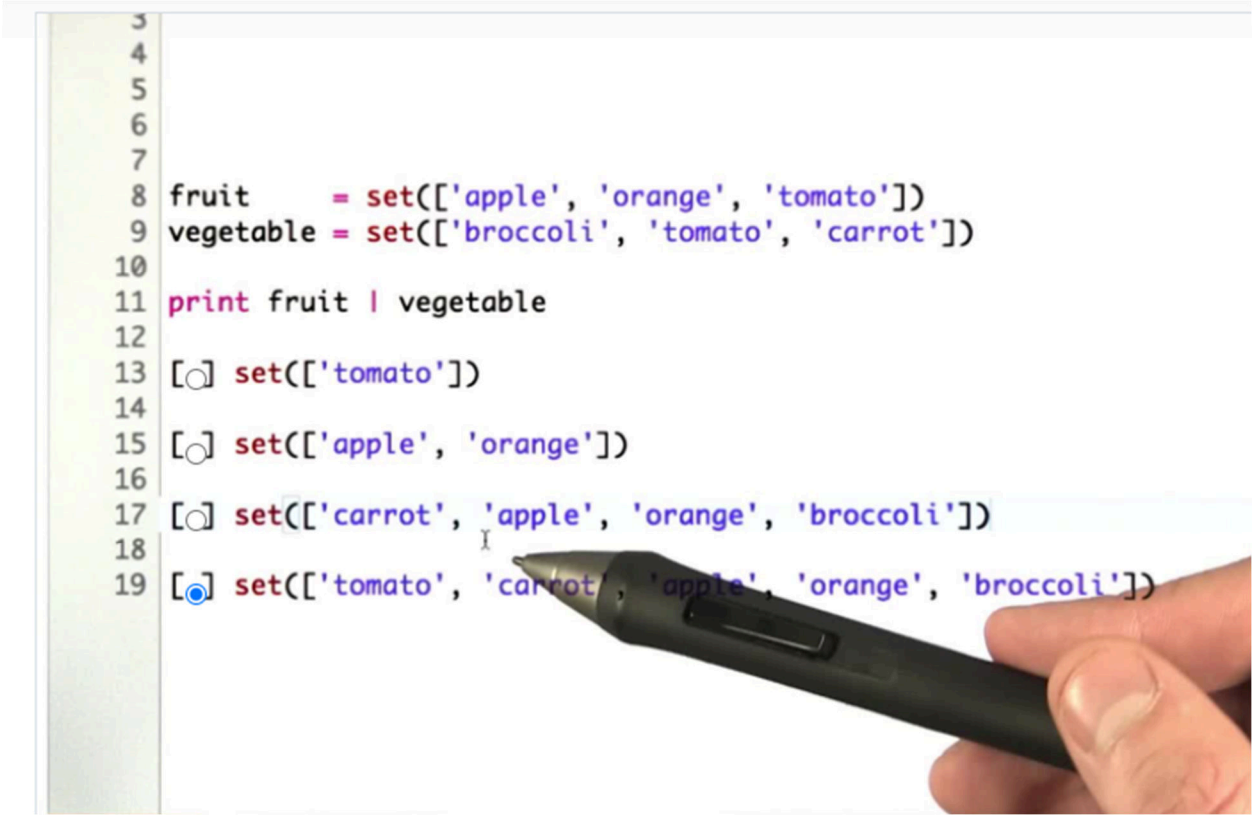
Set Theory Quiz



Python Sets



Generators

```
5  def sumsquares(n):
6      squares = []
7      for x in range(n+1):
8          squares.append(x*x)
9      return sum(squares)
10
11 print sumsquares(1000000)
12
13 [◉] Messy: it clutters up our program
14
15 [ ] Uses memory unnecessarily
16
17 [ ] Runs too slowly
18
19 [ ] The code doesn't work!
```

Generators 2

```
5  print sum([x*x for x in range(1000001)])
6
7  [ ] Messy: it clutters up our program
8
9  [◉] Uses memory unnecessarily
10
11 [ ] Runs too slowly
12
13 [ ] The code won't work
```

Generators 3

```
1
4
9
16
25
36
49
64
81
100
>>> def gensquares(n):
...     i = 0
...     while i <= n:
...             yield i*i
...             i += 1
...
>>> gensquares
<function gensquares at 0x1004b17d0>
>>> gensquares(11)
<generator object gensquares at 0x1004a7730>
>>> next(gensquares(11))
0
>>> [◉] 0    [○] 1    [○] 4    [○] 121
```

Scope Quiz

```
1  x = 2
2  y = 3
3  def add_nums():
4      y = 6
5      return x + y
6
7  print add_nums()
8
9
10 # what will the output be when I click RUN?
11
12 # (◉)   8
13 #
14 # (○)   5
15 #
16 # (○)   NameError
```