```
1: import itertools
2: def iter_primes():
3:      # an iterator of all numbers between 2 and +infinity
4:      numbers = itertools.count(2)
5:      # generate primes forever
6:      while True:
7:          # get the first number from the iterator (always a prime)
8:          prime = numbers.next()
9:          yield prime
10:          # this code iteratively builds up a chain of
11:          # filters...slightly tricky, but ponder it a bit
12:          numbers = itertools.ifilter(prime.__rmod__, numbers)
13: for p in iter_primes():
14:     if p > 1000:
15:         break
16:     print p
```

```
  1           0 LOAD_CONST               0 (-1)
              3 LOAD_CONST               1 (None)
              6 IMPORT_NAME              0 (itertools)
              9 STORE_NAME               0 (itertools)
  3          12 LOAD_CONST               2 ()
             15 MAKE_FUNCTION            0
             18 STORE_NAME               1 (iter_primes)
 17          21 SETUP_LOOP              38 (to 62)
             24 LOAD_NAME                1 (iter_primes)
             27 CALL_FUNCTION            0
             30 GET_ITER
        >>   31 FOR_ITER                27 (to 61)
             34 STORE_NAME               2 (p)
 18          37 LOAD_NAME                2 (p)
             40 LOAD_CONST               3 (1000)
             43 COMPARE_OP               4 (>)
             46 POP_JUMP_IF_FALSE       53
 19          49 BREAK_LOOP
             50 JUMP_FORWARD             0 (to 53)
 20      >>  53 LOAD_NAME                2 (p)
             56 PRINT_ITEM
             57 PRINT_NEWLINE
             58 JUMP_ABSOLUTE           31
        >>   61 POP_BLOCK
        >>   62 LOAD_CONST               1 (None)
             65 RETURN_VALUE
```