

**CSE 30**  
**Spring 2021**  
**Quiz 2**

**Solutions**

1. (25 Points) Fill in the definition of the **recursive** function `base7digits(n)` below that prints out the base 7 digits of the positive integer *n*. All output will be on a single line with no spaces between the digits. Your function need not print anything when  $n \leq 0$ . (Hint: this was discussed as an exercise in lecture on 4-1-21, and in the examples on the class webpage.)

```
def base7digits(n):  
  
    # begin solution  
  
    if n>0:  
        base7digits(n//7)  
        print(n%7, sep='', end='')  
    # end  
  
    # end solution
```

2. (25 Points) Fill in the definition of the Python function `sequence_gen(a, b)` below that returns a generator object which produces the (infinite) sequence of positive multiples of *a* that have remainder 1 when divided by *b*. Thus `sequence_gen(3, 5)` would produce the sequence: 6, 21, 36, 51, 66, 81, ... . You may assume that *a* and *b* are positive integers.

```
def sequence_gen(a, b):  
  
    # begin solution  
  
    k = a  
    while True:  
        if k%b==1  
            yield k  
        k += a  
    # end  
  
    # end solution
```