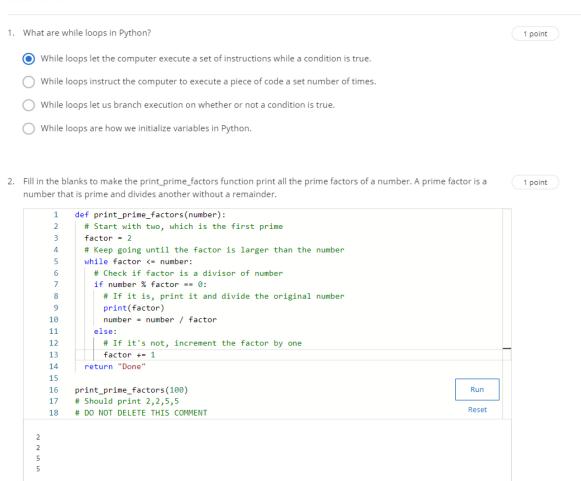
Practice Quiz: While Loops

TOTAL POINTS 5



3. The following code can lead to an infinite loop. Fix the code so that it can finish successfully for all numbers.

1 point

Note: Try running your function with the number 0 as the input, and see what you get!

```
def is_power_of_two(n):
         if n == 0:
   3
           return False
   4
          # Check if the number can be divided by two without a remainder
          while n % 2 == 0:
   6
          n = n / 2
          # If after dividing by two the number is 1, it's a power of two
   9
         if n == 1:
  10
          return True
  11
          return False
  12
                                                                                          Run
  13
  14 print(is_power_of_two(0)) # Should be False
False
True
True
False
```

number that divides into another without a remainder.

```
def sum_divisors(n):
   2
         sum = 0
          i = 1
   3
   4
          # Return the sum of all divisors of n, not including n
   5
          while i < n:
   6
            if n % i == 0:
             sum += i
             i += 1
   8
   9
            else:
  10
           i += 1
  11
  12
         return sum
                                                                                           Run
  13
       print(sum_divisors(0))
                                                                                           Reset
  14
0
55
```

5. The multiplication_table function prints the results of a number passed to it multiplied by 1 through 5. An additional requirement is that the result is not to exceed 25, which is done with the break statement. Fill in the blanks to complete the function to satisfy these conditions.

1 point

```
def multiplication_table(number):
            # Initialize the starting point of the multiplication table
            multiplier = 1
   3
   4
            # Only want to loop through 5
            while multiplier <= 5:
                result = multiplier * number
                # What is the additional condition to exit out of the loop?
   8
                if result > 25:
                   break
  10
                print(str(number) + "x" + str(multiplier) + "=" + str(result))
  11
                # Increment the variable for the loop
  12
                multiplier += 1
  13
  14
        multiplication_table(3)
       # Should print: 3x1=3 3x2=6 3x3=9 3x4=12 3x5=15
  15
  16
  17
       multiplication_table(5)
       # Should print: 5x1=5 5x2=10 5x3=15 5x4=20 5x5=25
  18
                                                                                             Run
  19
  20
       multiplication_table(8)
                                                                                            Reset
  21
        # Should print: 8x1=8 8x2=16 8x3=24
3x1=3
3x2=6
3x3=9
3x4=12
3x5=15
5x1=5
5×2=10
5x3=15
5×4=20
5x5=25
8x1=8
8x2=16
8x3=24
```

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