

None of the numbers below have “trailing” zeroes; that is, the rightmost digit of each answer is NOT a zero.

1. Find the number that satisfies the following collection of clues:
 - It uses each of the digits 2, 3, 6, and 9 once, and no other digits.
 - The digit in the 10^{-1} position is a third of that in the tens position.
 - The digit in the 10^0 position is three more than the digit in the tenths position.
 - The smallest digit is in the 10^{-2} position.
2. Find two different numbers that satisfy the following collection of clues:
 - It uses each of the digits 2, 3, 6, and 9 once, and no other digits.
 - The digit in the 10^{-1} position is a third of that in the tens position.
 - The ones and tens digits differ by three.
 - The 10^{-2} position is the smallest position that is used.
3. Find all possible numbers that satisfy the following collection of clues:
 - There are no digits in the ten thousandths position or smaller.
 - Rounded to the nearest ten, the number is 50.
 - The digit in the tens position is one less than that in the 10^{-1} position.
 - The two rightmost digits are equal.
 - The total of all the digits is 20.
4. Find all possible numbers that satisfy the following collection of clues:
 - The digit in the 10^{-1} position is a third of that in the tens position.
 - The digit in the 10^0 position is three more than the digit in the tenths position.
 - The digit in the 10^{-2} position is 6 more than that in the tens position.
 - No digits appear in the ten thousandths position or smaller.
 - No digits appear in the 10^2 position or higher.
5. Find all possible numbers that satisfy the following collection of clues:
 - The digit in the tens position is 3 times that in the 10^{-1} position.
 - Rounded to the nearest hundred, the number is 500.
 - Neither the first nor the last digit is odd.
 - The digit in the 10^0 position is three more than the digit in the tenths position.
 - No digits appear in the hundredths position or smaller.
6. Find all possible numbers that satisfy the following collection of clues:
 - The digit in the tenths position is 3 times that in the 10^{-2} position.
 - Rounded to the nearest ten, the number is 500.
 - The digits in the tens and the 10^0 positions are equal.
 - No digits appear in the 10^{-3} position or smaller.
 - The rightmost digit is odd.

Math 310 - Dr. Miller - Solutions to HW #7: Decimal Clues

1. 96.32

2. 69.23 or 96.32 or 63.29

3. no answer available

4. Any number from 34.191 up through 34.199

5. 465.2

6. 500.31 or 500.93 or 499.31 or 499.93