Kathy 5.3

Explain the solution:

1. Use the process called elimination for the upper 4 digits.

= elimination
0 0, 1 and 2 explained in step 3
1
2
3 Can't use 3 because already it's what you times it by.
4
5
6
7 7,8 explained in step 4
8
9 Third digit of the upper 4 digits

2. There will be a couple of consecutive numbers that can be chosen from: 0,1,2 4,5,6 5,6,7 6,7,8 7,8,9.
3. 0,1,2 is unavailable as the 3rd digit of the upper 4 digits has to be the sum of any 2 digits. 0+1=1, 0+2=2, 1+2=3. 1,2,3 will all be used.
4. 5,6,7 6,7,8 7,8,9 is unavailable because even 5 and 6 (the smallest numbers) already add up to 11! Which is not possible.
5. The only possible consecutive numbers is 4,5,6 with 9 as the third digit (4+5=9)
6. The possible 4 digit numbers are:

4596 Can't work because 6x3 is 18 and 8 should not be the 5th digit.
4695 Can't work because 5x3 is 15 and 5 is used.
5496 Same as 4596
5694
6594
6495 Same as 4695

7. The two consecutive numbers in the lower 5 digit number (the 2nd and 4th digit of it) should be 7 and 8. The 1st, 3rd, and 5th digit of the lower 5 digit number should be 0,1,2.

```
 1 2 1                  2 2 1
  6594                   5694
X    3                 X    3
------                 ------
19782                  17082
```