Name: Period:

**Crack the Code Activity**

***Chapter 13 – Sound***

**CONFIDENTIAL**

**From**: ***FBI***

**RE**: ***Code Breaking***

We have been monitoring the telephone calls made by the suspected organized crime boss which we discussed at our last rendezvous. The numbers on a telephone all create three distinct frequencies that are spaced evenly across their known frequency spectrum. In order to pinpoint his location, we need you to identify the ten-digit telephone number from which the suspect is calling. So far, we have only the following data and other information:

|  |  |
| --- | --- |
| Number | Known Frequency Range |
| 0 | 1100 - 1300 Hz |
| 1 | 1000 - 1200 Hz |
| 2 | 500 - 700 Hz |
| 3 | 1200 - 1400 Hz |
| 4 | 600 - 800 Hz |
| 5 | 800 - 1000 Hz |
| 6 | 700 - 900 Hz |
| 7 | 1300 - 1500 Hz |
| 8 | 1000 - 1400 Hz |
| 9 | 700 - 1100 Hz |

1. The second three numbers have no frequencies in common.
2. The first two numbers have no frequencies in common.
3. The third number from the first three numbers shares two frequencies with one of the numbers in the first three numbers.
4. The fourth number shares a frequency with the third number
5. The fifth number shares a frequency with the seventh number
6. The sixth number shares a frequency with two of the first three numbers
7. The seventh and eighth number have no frequencies in common
8. The ninth number shares a frequency with the seventh number
9. The last numbers lowest frequency equals the sixth number highest frequency

***Results:***

\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ - \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ - \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

***Good luck.***

***We’re all counting on you.***