

# CLASS HANDOUT. BASE 4 NUMBERS.

You have only 4 digits: 0, 1, 2, 3. When you have 4 items, you simply do not have digit 4 to use.

You have to go to the next digit position. Let's name 4 items with a  , and 16 items with a 

| Base 10 | Base 4 | Base 4 meaning                                                                                                                                                            |  | Base 10 | Base 4 | Base 4 meaning |
|---------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------|--------|----------------|
| 0       | 0      | 0                                                                                                                                                                         |  |         |        |                |
| 1       | 1      | 1                                                                                                                                                                         |  |         |        |                |
| 2       | 2      | 2                                                                                                                                                                         |  |         |        |                |
| 3       | 3      | 3                                                                                                                                                                         |  |         |        |                |
| 4       | 10     |                                                                                          |  |         |        |                |
| 5       |        |  + 1                                                                                     |  |         |        |                |
| 6       |        | + 2                                                                                                                                                                       |  |         |        |                |
| 7       |        |                                                                                                                                                                           |  |         |        |                |
| 8       |        | 2                                                                                      |  |         |        |                |
| 9       |        |                                                                                                                                                                           |  |         |        |                |
| 10      |        |                                                                                                                                                                           |  |         |        |                |
| 11      |        |                                                                                                                                                                           |  |         |        |                |
| 12      |        |                                                                                                                                                                           |  |         |        |                |
| 13      |        |                                                                                                                                                                           |  |         |        |                |
| 14      |        |                                                                                                                                                                           |  |         |        |                |
| 15      |        |                                                                                                                                                                           |  |         |        |                |
| 16      |        |                                                                                        |  |         |        |                |
| 17      |        |  +1                                                                                    |  |         |        |                |
| 18      |        |                                                                                                                                                                           |  |         |        |                |
| 19      |        |                                                                                                                                                                           |  |         |        |                |
| 20      |        |  +  |  |         |        |                |