

NATO	Letter	Decimal (base 10)	Binary (base 2)	Ternary (base 3)	Hex (base 16)	Letter	Morse	Braille	Semaphore	Pigpen
Alfa	<b>A</b>	<b>1</b>	00001	001	01	<b>A</b>	•—	⠠	↗	└
Bravo	<b>B</b>	<b>2</b>	00010	002	02	<b>B</b>	—••	⠡	↖	┘
Charlie	<b>C</b>	<b>3</b>	00011	010	03	<b>C</b>	—•—•	⠢	↙	└
Delta	<b>D</b>	<b>4</b>	00100	011	04	<b>D</b>	—••	⠣	⤴	┘
Echo	<b>E</b>	<b>5</b>	00101	012	05	<b>E</b>	•	⠠	↙	□
Foxtrot	<b>F</b>	<b>6</b>	00110	020	06	<b>F</b>	••—•	⠣	↖	┘
Golf	<b>G</b>	<b>7</b>	00111	021	07	<b>G</b>	—•—	⠢	↗	└
Hotel	<b>H</b>	<b>8</b>	01000	022	08	<b>H</b>	••••	⠠	↘	┘
India	<b>I</b>	<b>9</b>	01001	100	09	<b>I</b>	••	⠠	↘	└
Juliett	<b>J</b>	<b>10</b>	01010	101	0A	<b>J</b>	•—•••	⠠	↖	└
Kilo	<b>K</b>	<b>11</b>	01011	102	0B	<b>K</b>	—•—	⠢	↗	┘
Lima	<b>L</b>	<b>12</b>	01100	110	0C	<b>L</b>	•—••	⠢	↘	└
Mike	<b>M</b>	<b>13</b>	01101	111	0D	<b>M</b>	—•—	⠢	↘	┘
November	<b>N</b>	<b>14</b>	01110	112	0E	<b>N</b>	—•	⠢	↗	┘
Oscar	<b>O</b>	<b>15</b>	01111	120	0F	<b>O</b>	—••—	⠢	↖	┘
Papa	<b>P</b>	<b>16</b>	10000	121	10	<b>P</b>	•—•••	⠢	↖	└
Quebec	<b>Q</b>	<b>17</b>	10001	122	11	<b>Q</b>	—••—	⠢	↙	┘
Romeo	<b>R</b>	<b>18</b>	10010	200	12	<b>R</b>	•—•	⠢	⤴	└
Sierra	<b>S</b>	<b>19</b>	10011	201	13	<b>S</b>	•••	⠢	↘	∨
Tango	<b>T</b>	<b>20</b>	10100	202	14	<b>T</b>	—	⠢	↘	∨
Uniform	<b>U</b>	<b>21</b>	10101	210	15	<b>U</b>	••—	⠢	↙	∨
Victor	<b>V</b>	<b>22</b>	10110	211	16	<b>V</b>	•••—	⠢	↖	∧
Whiskey	<b>W</b>	<b>23</b>	10111	212	17	<b>W</b>	•—•—	⠢	↖	∨
X-ray	<b>X</b>	<b>24</b>	11000	220	18	<b>X</b>	—••—	⠢	↘	∨
Yankee	<b>Y</b>	<b>25</b>	11001	221	19	<b>Y</b>	—•—•	⠢	↙	∧
Zulu	<b>Z</b>	<b>26</b>	11010	222	1A	<b>Z</b>	—•••	⠢	↗	∧

## The Basics

- Puzzles usually solve to a word or short phrase.
- Different forms of encoding are used - don't panic, you will be given a code sheet.
- There are rarely outright instructions for how to solve a puzzle, but sometimes you can find hints in the introductory text. For example references to "in the dark" or "sight" are often hints something is encoded with braille.
- Puzzles will often have multiple steps to get to the answer word.
- Basic newspaper puzzles such as sudoku, crosswords, and word searches are often incorporated as one of the steps in solving the puzzle. Keep in mind that unlike a typical newspaper puzzle, you will be somehow extracting one word or phrase out of the puzzle.
- If the answer you end up with is a garbled "alphabet soup", then look for a clue on how to order them. Answers will rarely be an anagram. If you can't figure it out, you can use an anagram solver like <http://www.wordsmith.org/anagram/>

## Codes

- **Braille:** Braille is frequently clued in the introductory text by the words "Look," "See," or "Blind." Try braille when a puzzle contains 2x3 grids or matrices. Occasionally, braille is coded in 6-digit sequences.
- **Morse code:** Morse code is often clued by the words "dot," "dash," or "telegram" in the introductory text. Look for data that breaks down easily into three different categories (dots, dashes, and spaces).
- **Semaphore:** Puzzles that contain semaphore are sometimes clued by the words "flag," or "Signal." Puzzles that use semaphore often use clocks or time. Also look for directions (bearings) or anything that rotates about or comes from a central axis.
- **Binary:** Binary is often clued by the words "On," "Off," or computer-related words. Binary is often expressed in groups of five digits (although it can be as little as two or as many as eight). Look for groups of data that contain two different categories of objects.
- See your **Code Sheet** for others.

## Techniques

- An **Acrostic** is a clue where the first letter, syllable, or word of each line, paragraph, or other recurring feature spells out a word or message.
- **Indexing** When you have a list of words or phrases and a corresponding list of numbers, indexing may be at play. Count into the word or phrase by the given number and record the letter in that position. For example, "2 Cake, 6 Pudding, 5 Shortening" gives you: Cake, Pudding, and Shortening, or ant.
- **Alpha-numeric** codes map numbers to letters. Try replacing the numbers with the corresponding letters like this: 1 = A, 2 = B, 3 = C... 26 = Z. Occasionally, these types of codes will "wrap around," so don't despair if you see a number greater than 26. Just subtract 26 and try again. In this scenario 27 (27-26 = 1) is A, 28 (28-26 = 2) is B etc. If you try this and it doesn't work, try other numeric codes such as ASCII.
- **Caesar Shifts** are like alpha-numeric codes, in that you change letters to numbers and back again, but adding or subtracting. For example, shifting OHMS by 1 will give you the next letter in the alphabet for each: PINT.

## More

- If none of the above codes or methods work, consider other encryption mechanisms such as **ternary** (like binary, but base three instead of two), **hexadecimal**, **nautical flags**, **pigpen**, etc. Many codes are available in the Puzzle Sidekick app for iPhones: <https://puzzlesidekick.com>
- Puzzles will sometimes contain no encryption at all and instead rely on word play, basic logic, or other mechanisms.

- It's not a trivia contest. Using Google is acceptable and encouraged.
- Hints are always free. If you get stuck, come talk to us.
- All attendees — from players to organizers — are expected to act in accordance to our code of conduct. <http://puzzledpint.org/coc>

