

## Quarto Postcodes (inline)

```
from letters import nL

RE = r'^[A-Z]{1,2}[0-9]{1,2}[A-Z]? [0-9][A-Z]{2}$'

def n_poss_postcodes_for_re():
    """
    Number of strings matching:
    ^[A-Z]{1,2}[0-9]{1,2}[A-Z]? [0-9][A-Z]{2}$
    """
    n_postal_areas = nL + nL * nL # 1 or two letters
    n_postal_districts = 10 + 100 # Any one or two digit number
    # 0 and 0x aren't used, but match the regex
    n_subdistricts = nL + 1 # Not all letters are used,
    # and only for some London codes,
    # but for our regex...
    # The +1 is for ones not using a subdistrict

    n_outcodes = n_postal_areas * n_postal_districts * n_subdistricts
    n_incodes = 10 * nL * nL # Digit then two letters
    n_postcodes = n_outcodes * n_incodes

    return n_postcodes

if __name__ == '__main__':
    n = n_poss_postcodes_for_re()
```

The number of postcode-like strings matching

$$^[A-Z]{1,2}[0-9]{1,2}[A-Z]? [0-9][A-Z]{2}$$$

is 14,094,194,400