```
DigitFrequenciesInThePowersOfTwo[n_Integer?Positive] :=
  Table[Count[IntegerDigits[2^n], d], {d, 0, 9, 1}]
DigitFrequenciesInThePowersOfTwo[1]
DigitFrequenciesInThePowersOfTwo[10]
DigitFrequenciesInThePowersOfTwo[100]
DigitFrequenciesInThePowersOfTwo[3]
DigitFrequenciesInThePowersOfTwo[25]
DigitFrequenciesInThePowersOfTwo[92]
```

{0, 0, 1, 0, 0, 0, 0, 0, 0, 0}

{1, 1, 1, 0, 1, 0, 0, 0, 0, 0}

{6, 2, 6, 2, 2, 2, 5, 3, 1, 2}

{0, 0, 0, 0, 0, 0, 0, 0, 1, 0}

{0, 0, 1, 3, 2, 2, 0, 0, 0, 0}

{2, 5, 1, 0, 3, 4, 4, 2, 1, 6}