

Unit 34

Exponential function 2^x

- ① ② ④ ⑧ 16
- ③2 ⑥4 ⑫8 ⑫56 ⑫12
- ⑫24 ⑫048 ⑫4092
- ⑫8184 ⑫16368

First significant digit.



Benford law.

The digit 1 appears more frequently than say 8.

He found:

$$P(\text{digit is } k) = \log_{10}(k+1) - \log_{10}(k)$$

$$P(1) = \log_{10}(2) - \log_{10}(1)$$

$$P(2) = \log_{10}(3) - \log_{10}(2)$$

$$P(3) = \log_{10}(4) - \log_{10}(3)$$

$$\vdots$$
$$P(8) = \log_{10}(9) - \log_{10}(8)$$

$$P(9) = \log_{10}(10) - \log_{10}(9)$$

Sum :

1

Candy
crush

Experimental
math

$$2^x \sim x^2$$

Primes

You do not

need an
extensive table.

Handwritten scribbles or marks at the top of the page.

