Exponentials by the Numbers

One Penny Doubing Every Day and the Corresponding Amount

Here's the list of each day (1 through 30) with the corresponding value after doubling:

- **Day 1**: $0.01
- **Day 2**: $0.02
- **Day 3**: $0.04
- **Day 4**: $0.08
- **Day 5**: $0.16
- **Day 6**: $0.32
- **Day 7**: $0.64
- **Day 8**: $1.28
- **Day 9**: $2.56
- **Day 10: $5.12**
- **Day 11**: $10.24
- **Day 12**: $20.48
- **Day 13**: $40.96
- **Day 14**: $81.92
- **Day 15**: $163.84
- **Day 16**: $327.68
- **Day 17**: $655.36
- **Day 18**: $1,310.72
- **Day 19**: $2,621.44
- **Day 20: $5,242.88**
- **Day 21**: $10,485.76
- **Day 22**: $20,971.52
- **Day 23**: $41,943.04
- **Day 24**: $83,886.08
- Day 25: $167,772.16
- **Day 26**: $335,544.32
- **Day 27**: $671,088.64
- **Day 28**: $1,342,177.28
- **Day 29**: $2,684,354.56
- **Day 30: $5,368,709.12**

Comparing change at 32x vs 1 million x

Moore's Law increased at a rate of 32x per ten years

Since the doubling occurs every 2 years, we'll list the values at 2-year intervals over the 10-year period (years 0, 2, 4, 6, 8, 10). Starting with an initial value of 1:

- **Year 0** (start): 1
- **Year 2** (after 1 doubling): 1 × `2^1` = 2
- **Year 4** (after 2 doublings): 2 × 2 = 4
- **Year 6** (after 3 doublings): 4 × 2 = 8
- **Year 8** (after 4 doublings): 8 × 2 = 16
- **Year 10** (after 5 doublings): 16 × 2 = 32

The Next Ten Year with AI Compute Doubling Every Six Months

- 0 months: 1
- 6 months: 2
- 12 months: 4
- 18 months: 8
- 24 months: 16
- 30 months: 32
- 36 months: 64
- 42 months: 128
- 48 months: 256
- 54 months: 512
- 60 months: 1024
- 66 months: 2048
- 72 months: 4096
- 78 months: 8192
- 84 months: 16,384
- 90 months: 32,768
- 96 months: 65,536
- 102 months: 131,072
- 108 months: 262,144
- 114 months: 524,288
- 120 months: 1,048,576

Actual Numbers

30 Doublngs

Day 1: 2
Day 2: 4
Day 3: 8
Day 4: 16
Day 5: 32
Day 6: 64
Day 7: 128
Day 8: 256
Day 9: 512
Day 10: 1,024
Day 11: 2,048
Day 12: 4,096
Day 13: 8,192
Day 14: 16,384
Day 15: 32,768
Day 16: 65,536
Day 17: 131,072
Day 18: 262,144
Day 19: 524,288
Day 20: 1,048,576
Day 21: 2,097,152
Day 22: 4,194,304
Day 23: 8,388,608
Day 24: 16,777,216
Day 25: 33,554,432
Day 26: 67,108,864
Day 27: 134,217,728
Day 28: 268,435,456
Day 29: 536,870,912
Day 30: 1,073,741,824