复利和退休计划管理
(401K, 403b, 457 plans)

李春贵

invitation Only

复利和我们的401K退休计划

李春贵 Chuck Li

2025年5月18日 星期日
美中 3:00-4:30 PM

12800 WHITEWATER DRIVE S100
MINNETONKA, MN 55343

温习小学数学和复利知识

活学活用复利知识和理论

研究退休计划稳步增长规律

掌握积累三百万退休金秘诀

避免财务管理金融投资误区

Join Us!

Group: 明尼苏达财务和投资规划研究

财务规划的八个方面

Budget Planning & Debt Management & Emergency Fund
3 to 6 mo. expense

Real Estate/Mortgage
Mortgage Planning
Tax Planning on Investment Property

Education fund
How to Max Out Financial Aid?
Where to save? – 529?

Retirement plan
Growth/Safety/Longevity
How to create a Pension

Investment
Balance: Risk, Return, Liquidity

Tax
Tax now? Tax Later? Tax Free?

Family Protection
People: Health/Disability/Life/LTC
Asset: Market Risk/Legal/Tax

Estate Planning
Minor Children, Probate, Estate Tax
Will & Trust & POA

我们推荐的理念和原则

We encourage each family and every individual to have a financial plan in day one, encourage each family to review and update this financial plan in each of the family's milestones. We emphasize creating a **disciplined** and **active** (in opposite to **inactive** or **reactive**) financial plan with **sound, solid, effective** processes for all 8 sectors.

我们鼓励每一个家庭每一位朋友都在你开始工作学习的第一天，就建立一个金融计划， 鼓励在人生中每一个里程碑重新评价和更新这个金融计划。我们着重于鼓励需要的朋友们建立一个**有纪律性的积极的（反对消极的或者反应性）**的金融计划。在这个计划中我们可以帮助在八大块儿中的每一块都建立**强有力的，实实在在的，有效的**行事规则和方法来有效地管理个人和家庭的财务。

退休计划的五个投资基本法则

❖早投 （Invest earlier）
❖分散 （Diversification）
❖定投 （Dollar cost averaging)
❖长期 （Time in the market not timing the market）

❖保本 （Downside protection）

Interest Problems are word problems that use formula for calculating Interests as well as future values:
❖**Simple Interest and future value**
❖**Compound Interest and future value**
❖**Continuously Compounded Interest and future value**

❖ **In Finance, compounding is the process by which an asset's earnings, from either capital gains or interest, are reinvested to generate additional earnings over time.**

Interest Formulas

Simple Interest Formula

$$I = Prt$$

I = Interest
P = Principal (Initial Value)
r = Interest Rate
t = time (years)

Continuously Compounded Interest

$$A = Pe^{rt}$$

A = Future Value
P = Principal (Initial Value)
r = Interest Rate
t = time

Compound Interest Formula

$$A = P\left(1 + \frac{r}{n}\right)^{nt}$$

A = Future Value
P = Principal (Initial Value)
r = Interest Rate
n = number of times compounded in one "t"
t = time

❖ Simple interest is applied only to the principal and not any accumulated interest.

❖ Compound interest is interest accruing on the principal and previously applied interest.

❖ The effect of compound interest depends on how frequently it is applied.

❖ For bonds, the bond equivalent yield is the expected annual return.

❖ Continuously compounding returns scale over multiple periods.

❖ Interest compounding at its highest frequency is said to be compounding continuously.

Simple Interest and Future Value

Simple Interest Problem Example:

John wants to have an interest income of $3,000 a year. How much must he invest for one year at 8%?

Simple Interest Problem Example:

John wants to have an interest income of $3,000 a year. How much must he invest for one year at 8%?

Step 1: Write down the formula
$I = prt$
Step 2: Plug in the values
$3000 = p \times 0.08 \times 1$
$3000 = 0.08p$
$p = 37{,}500$

Answer: He must invest $37,500

Compound Interest and Future Value

Current Deposit Rates for 08/26/2023 - 09/01/2023

Savings Accounts:

Annual Percentage Yields (APYs) and Interest Rates shown are offered on accounts accepted by the Bank and effective for the dates shown above, unless otherwise noted. Interest Rates are subject to change without notice. Interest is compounded daily and paid monthly. Interest is calculated and accrued daily based on the daily collected balances in the account. Accrued interest is considered to be earned and will be paid only when the total interest accrued reaches $0.01 or more.

From https://www.wellsfargo.com/savings-cds/rates/

Compound Interest Problem Example:

Scott wants to invest $1000 for 1 year. At Bank A, his investment will collect 3% interest compounded daily while at Bank B, his investment will collect 3.50% interest compounded monthly. Which bank offers a better return? How much more will he receive by choosing that bank over the other?

Compound Interest Problem Example:

Scott wants to invest $1000 for 1 year. At Bank A, his investment will collect 3% interest compounded daily while at Bank B, his investment will collect 3.50% interest compounded monthly. Which bank offers a better return? How much more will he receive by choosing that bank over the other?

Bank B, $5.12

The inventor of chess (in some tellings Sessa, an ancient Indian Minister, year 1256) request his ruler give him wheat according to the wheat and chessboard problem. The ruler laughs it off as a meager prize for a brilliant invention, only to have court treasurers report the unexpectedly huge number of wheat grains would outstrip the ruler's resources.
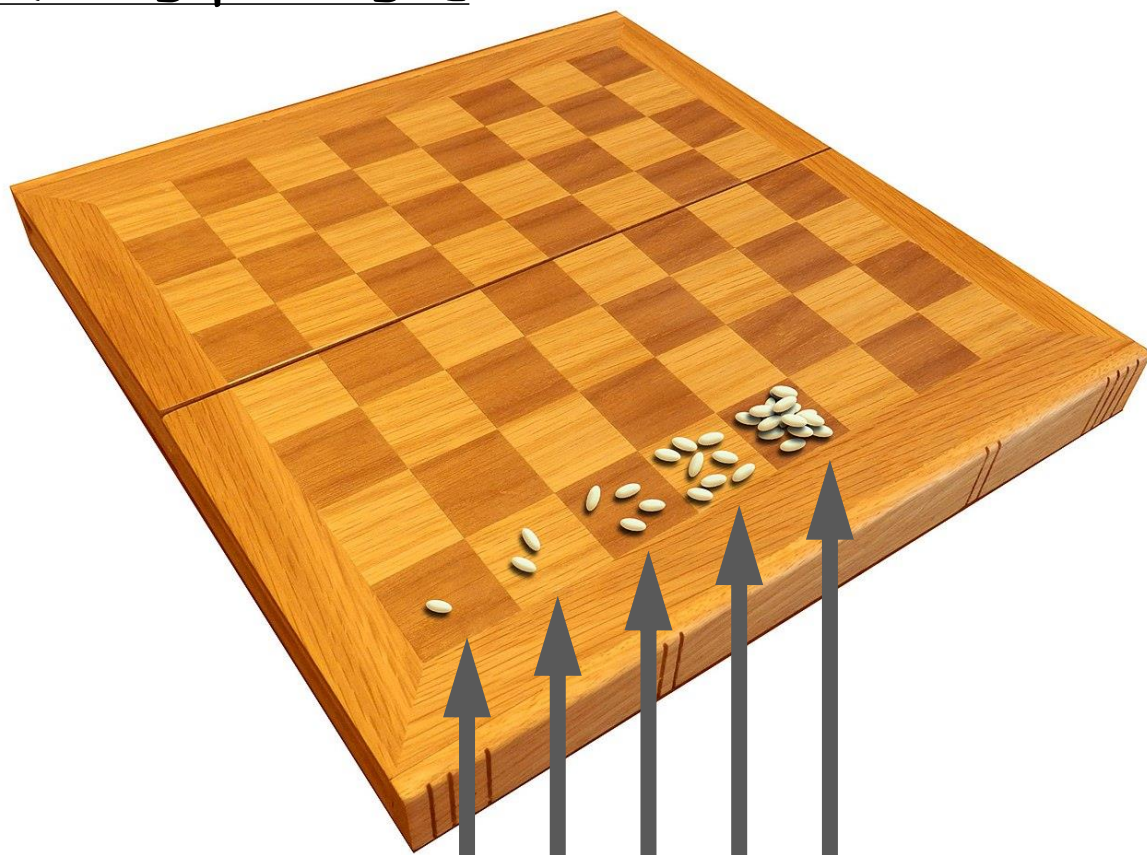
1 2 4 8 16 ...

2^0 2^1 2^2 2^3 2^4 ...

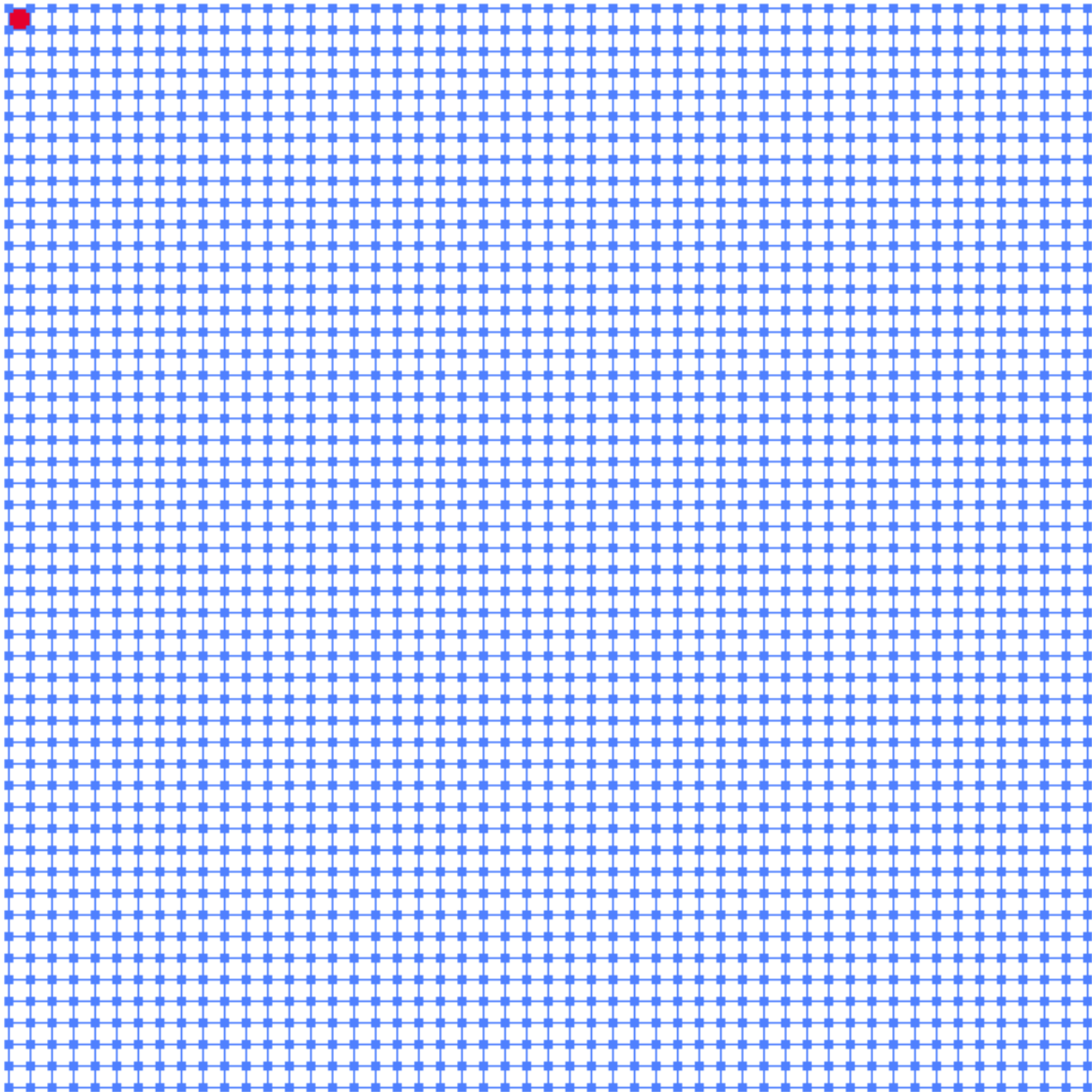# Would you rather have a million dollars or a penny on day 1, doubled every day until day 30?
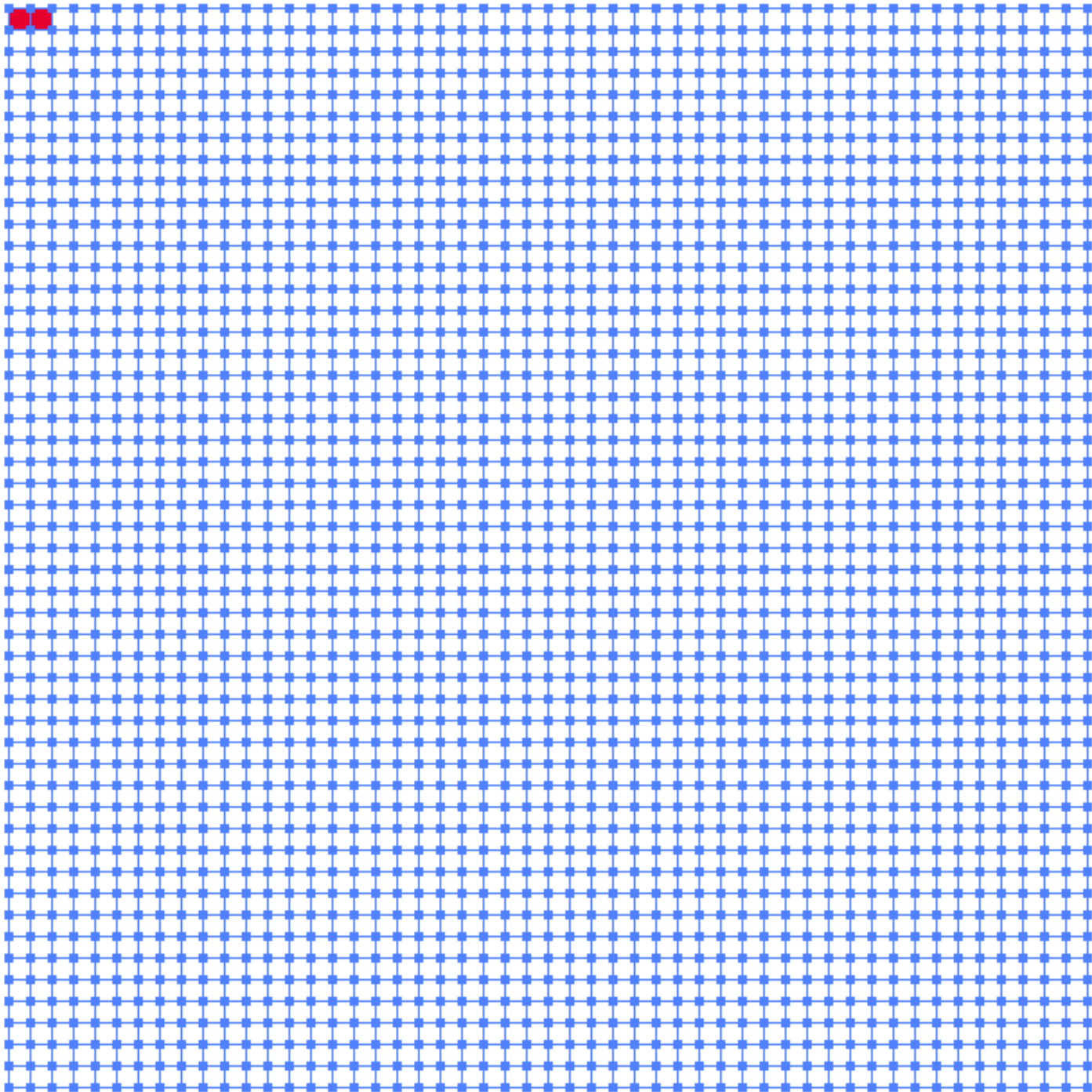
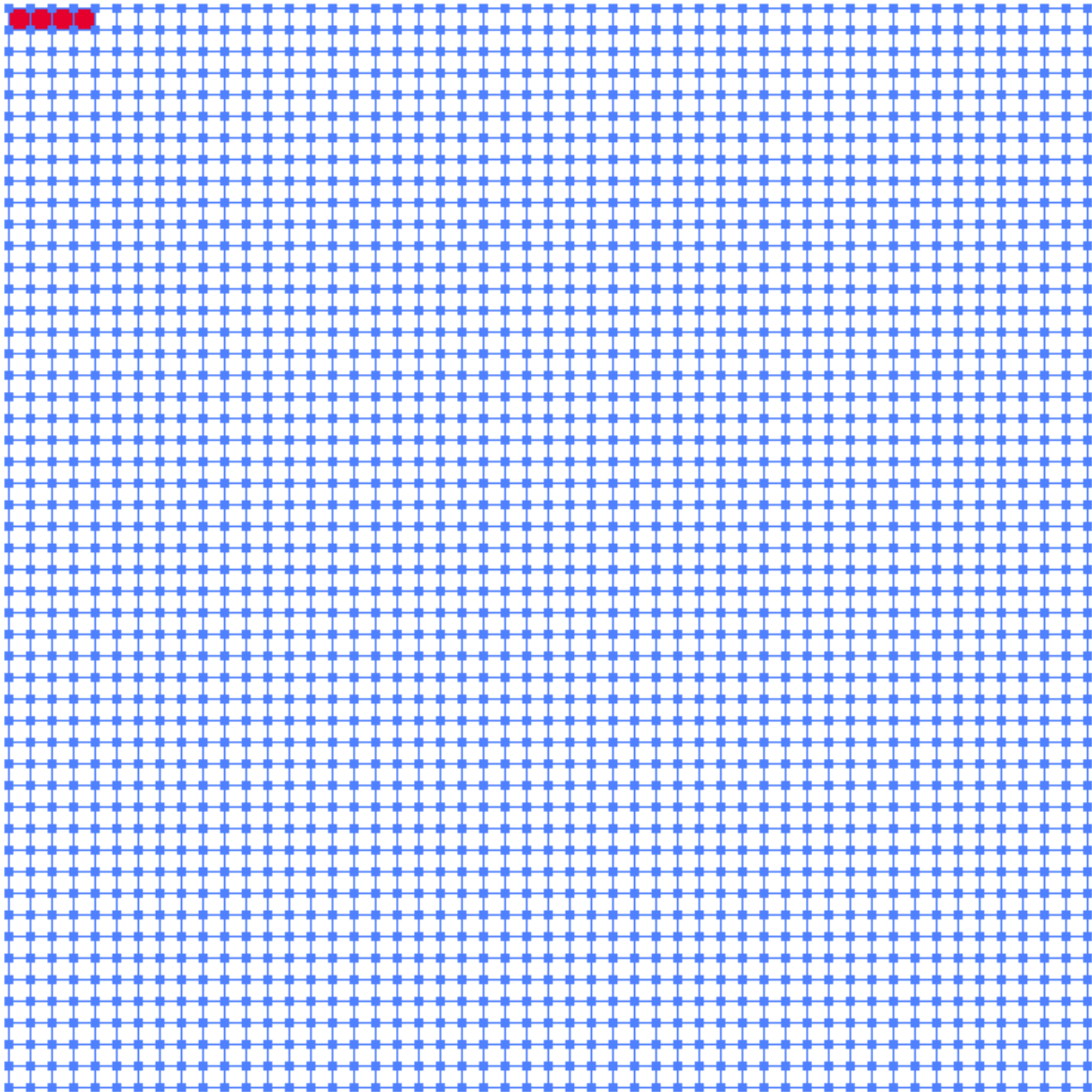$2^{30}-1=1,073,741,823$ Cents
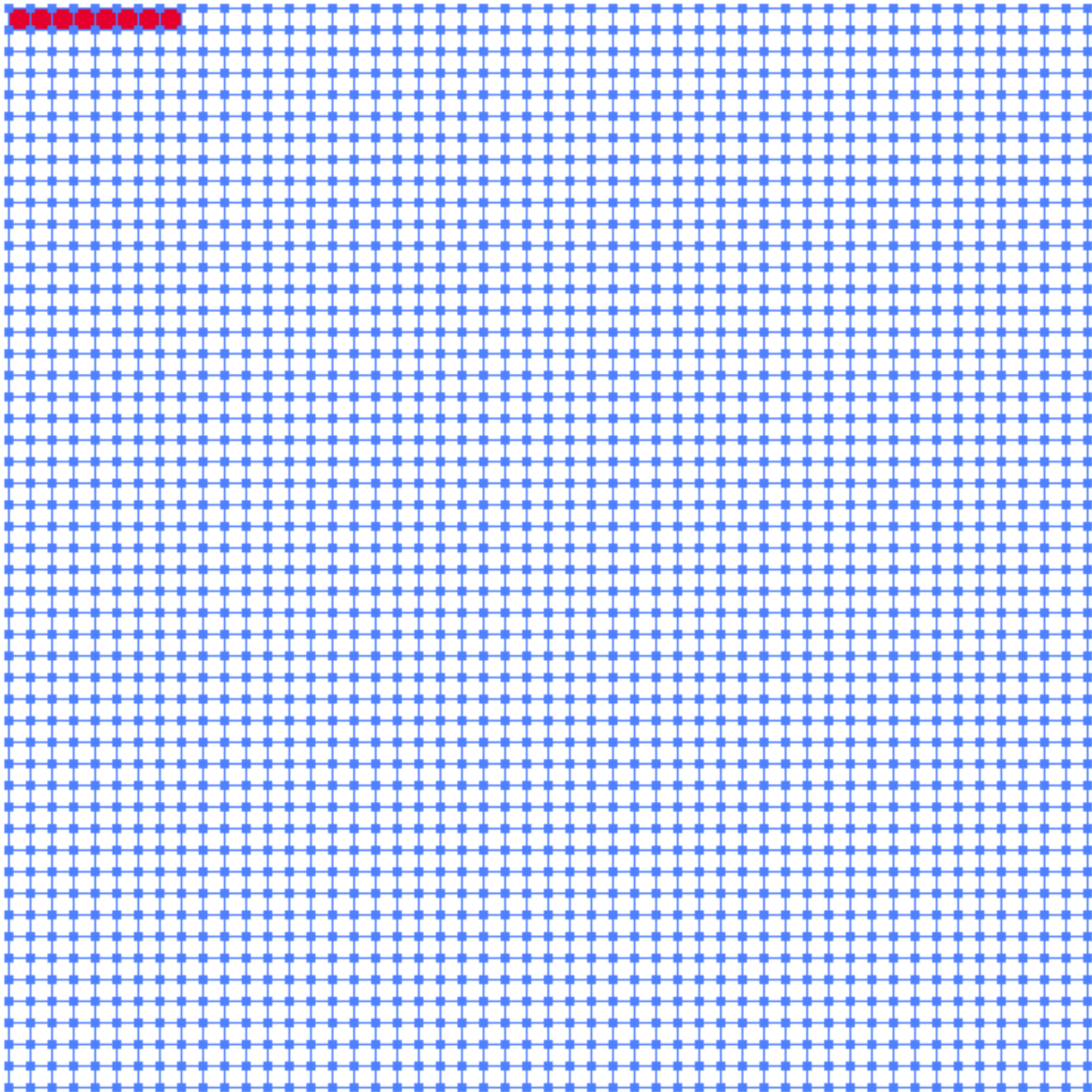
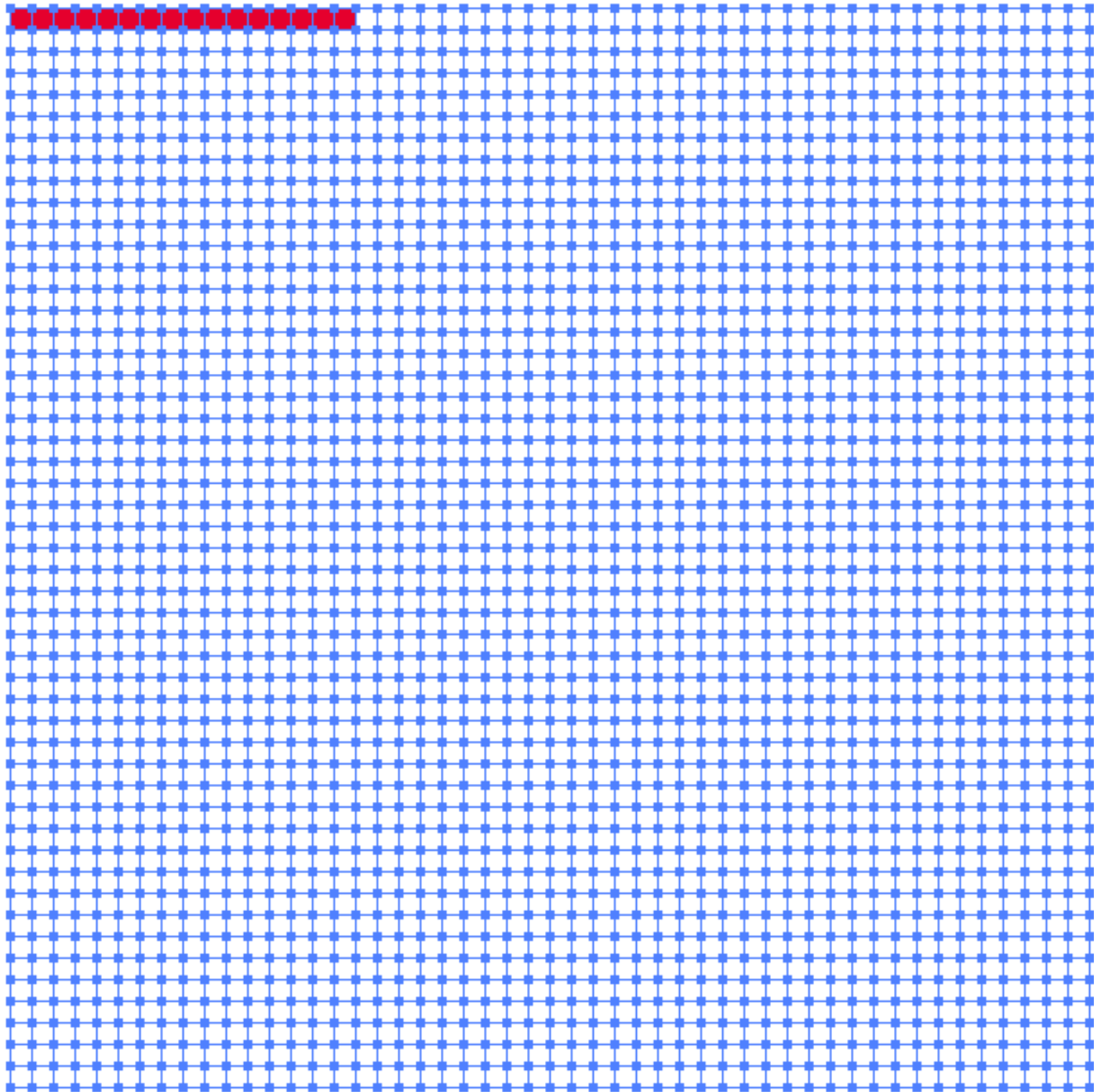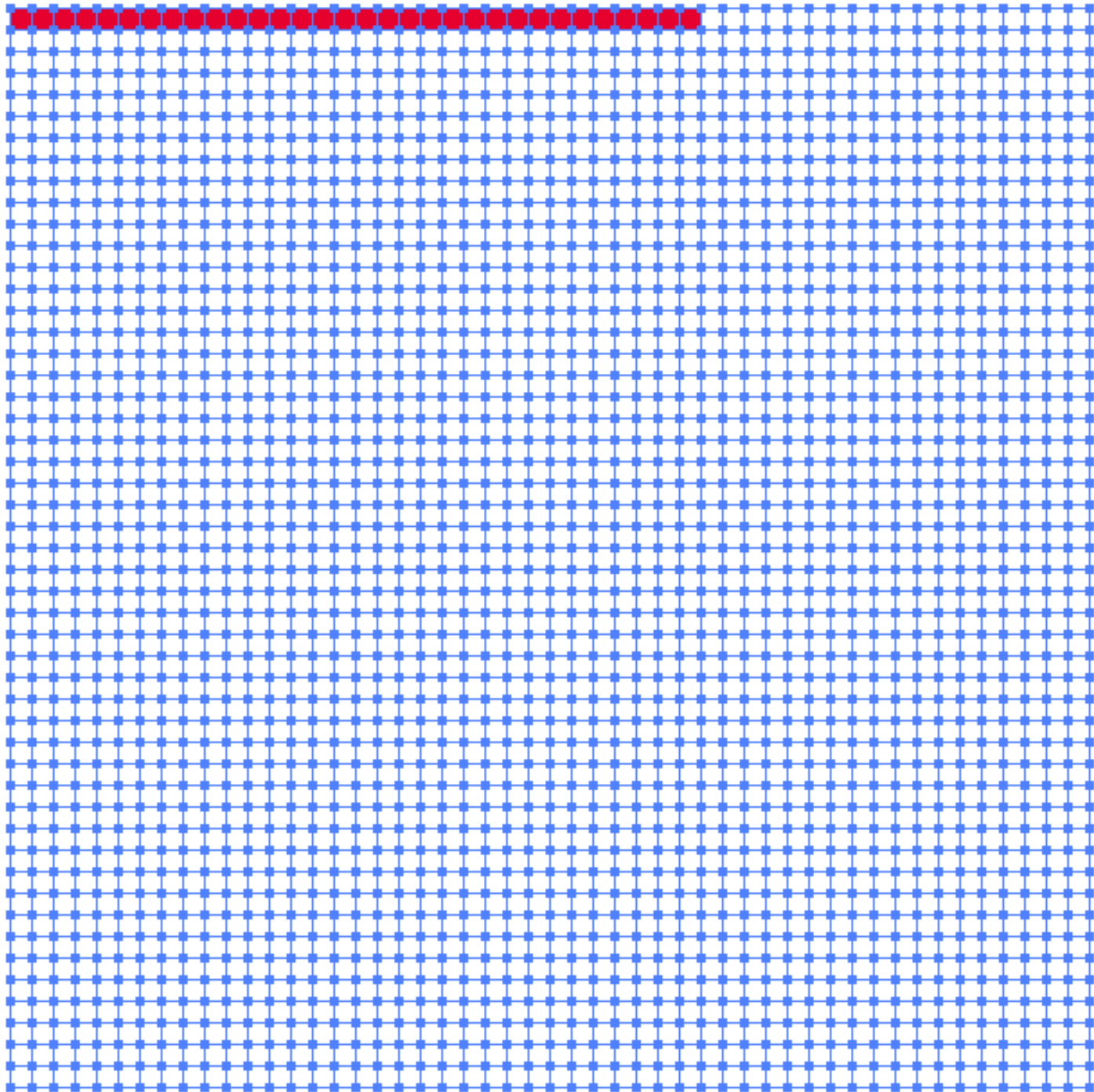Or: over 10 million dollars

Day 0

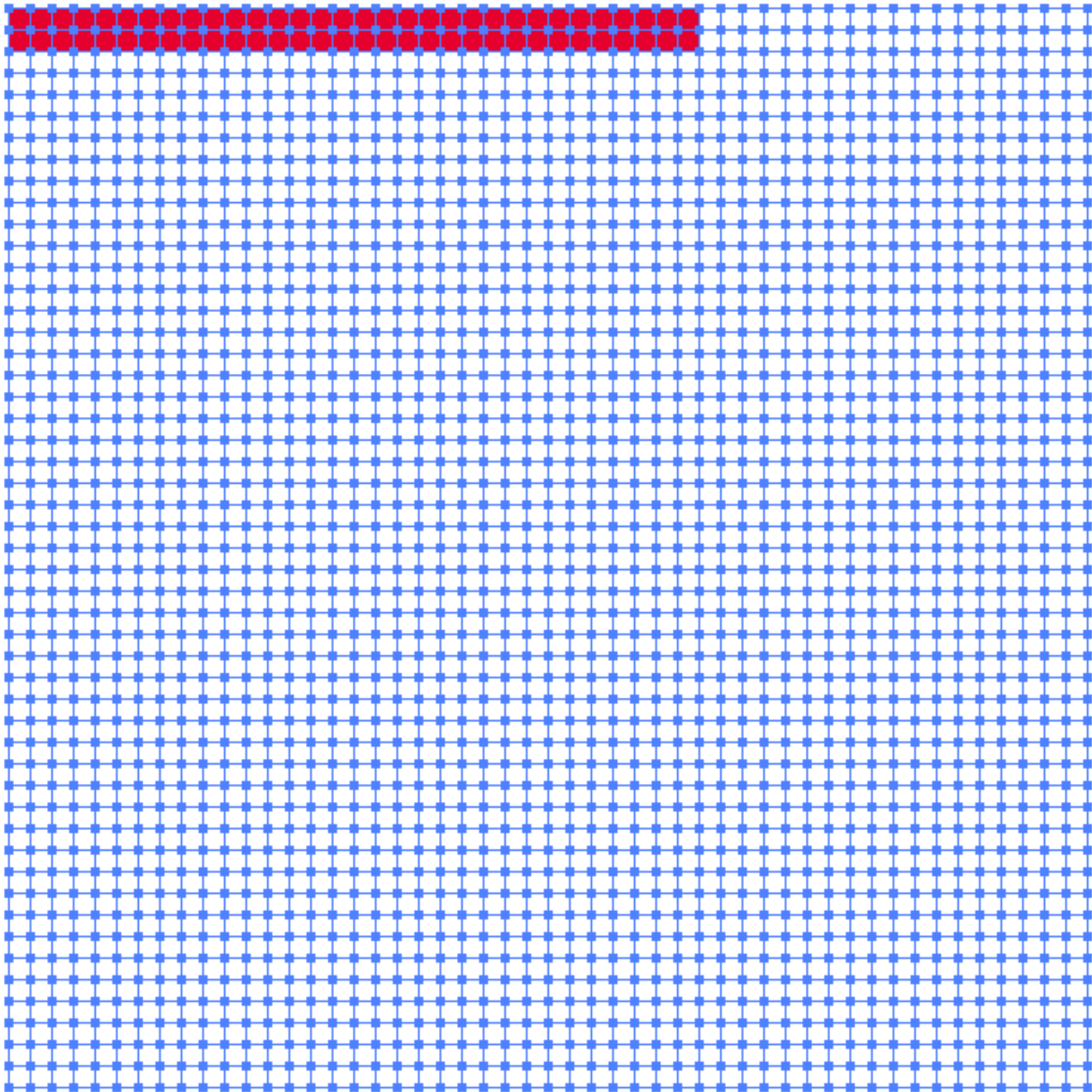2^0

Day 1

2^1

Day 2

2^2

Day 3

2^3

Day 4

2^4

Day 5

2^5

Day 6

2^6

Day 7

2^7
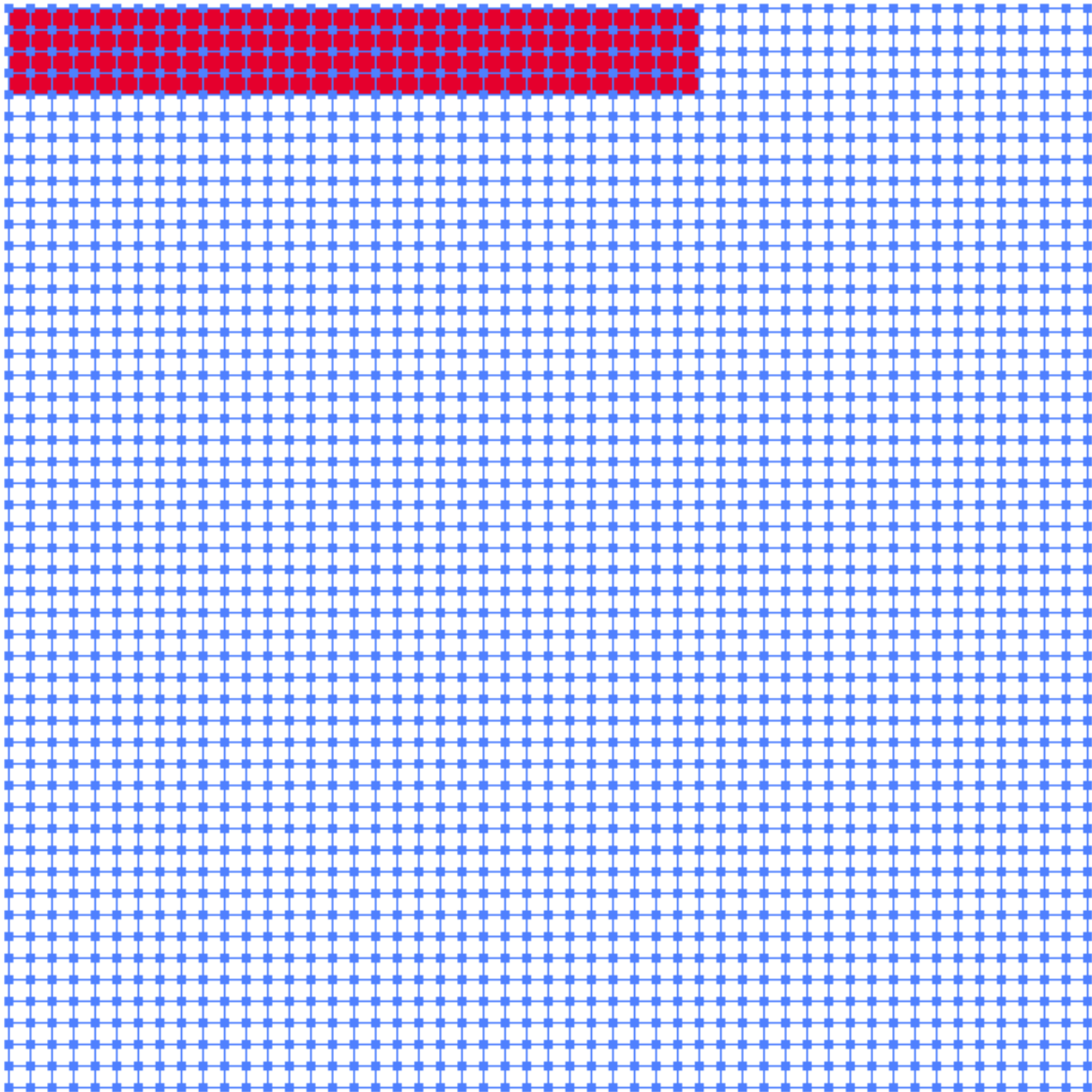
Day 8

2^8
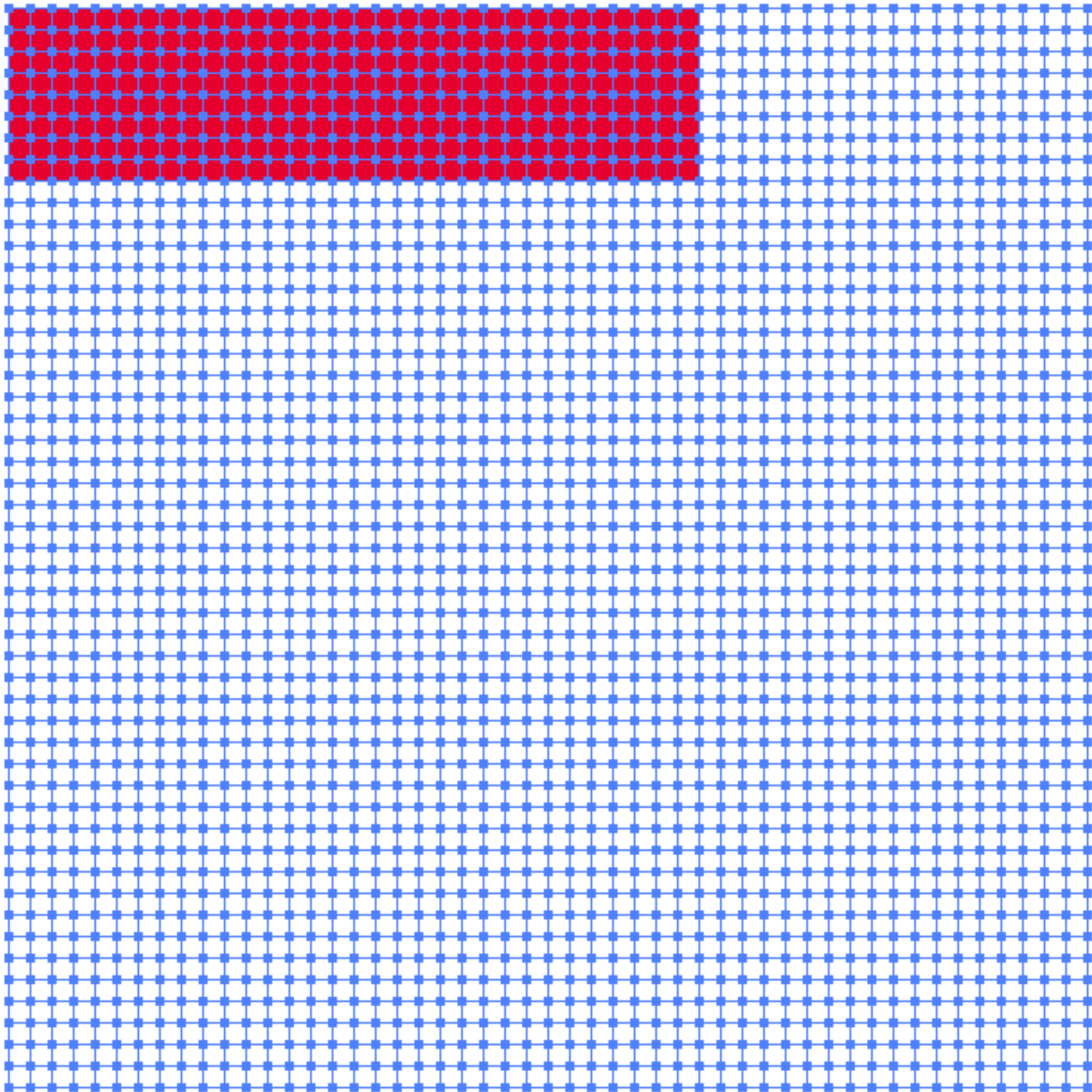
Day 9

2^9
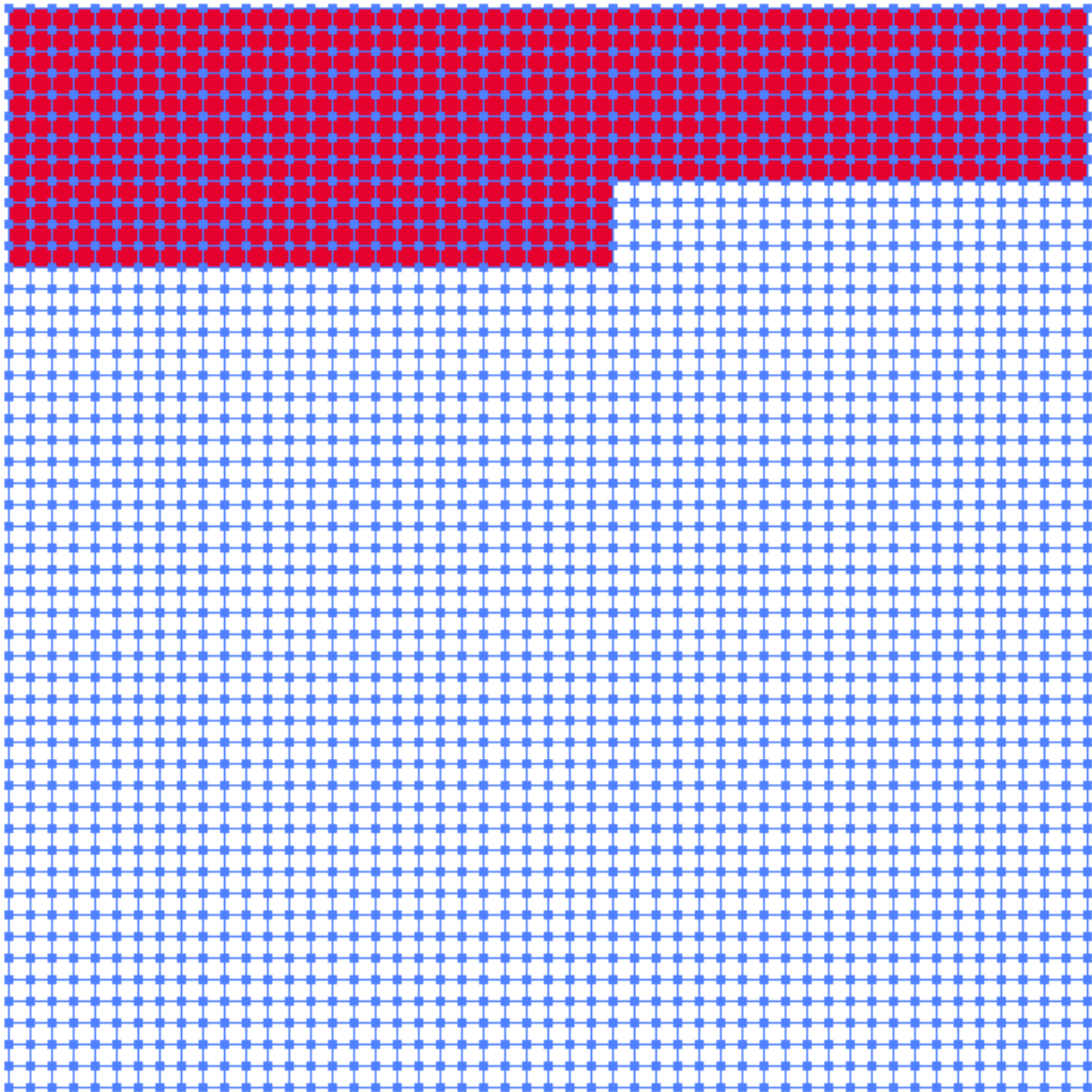
Day 10

2^{10}
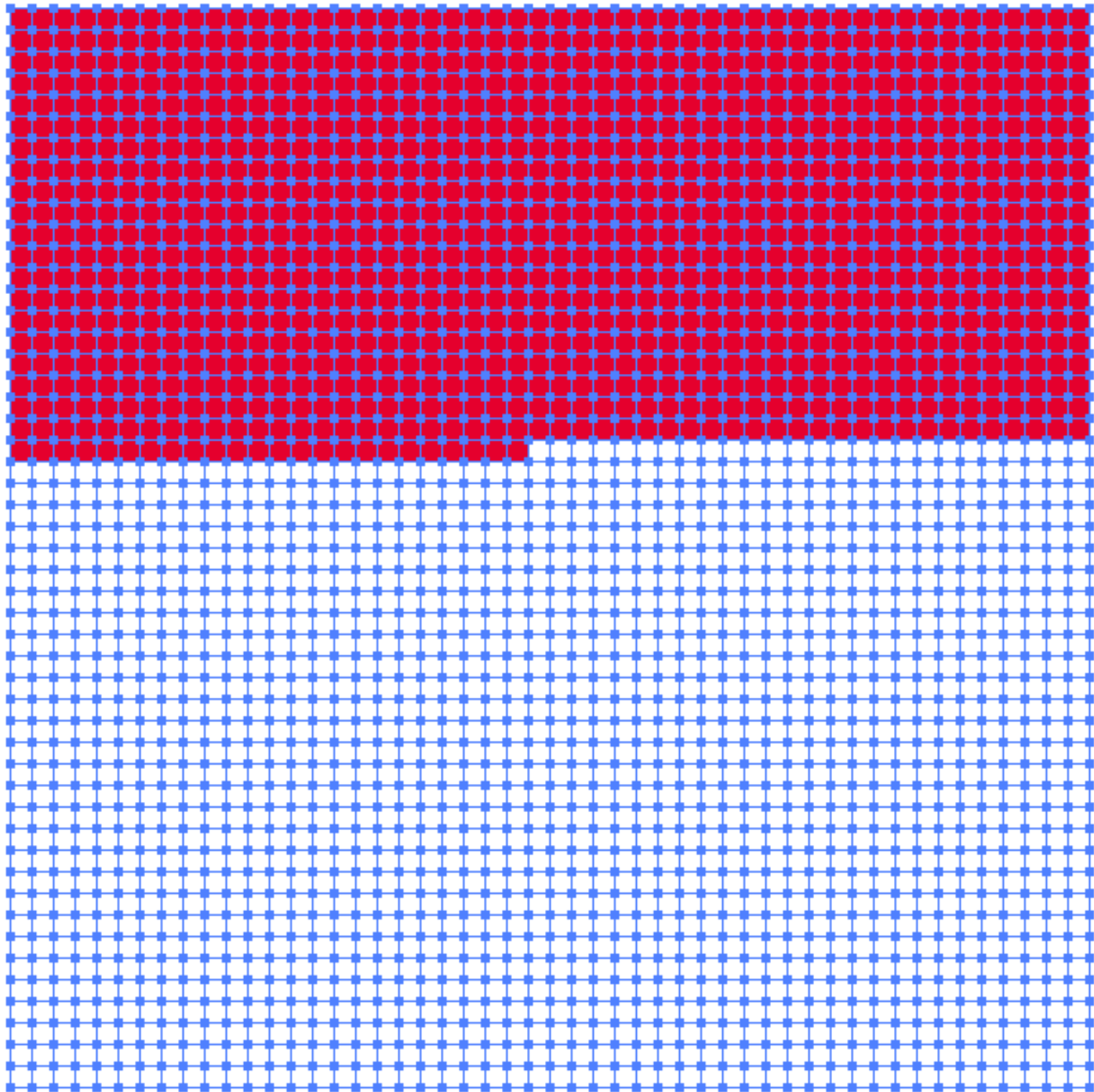
Day 11

2^{11}
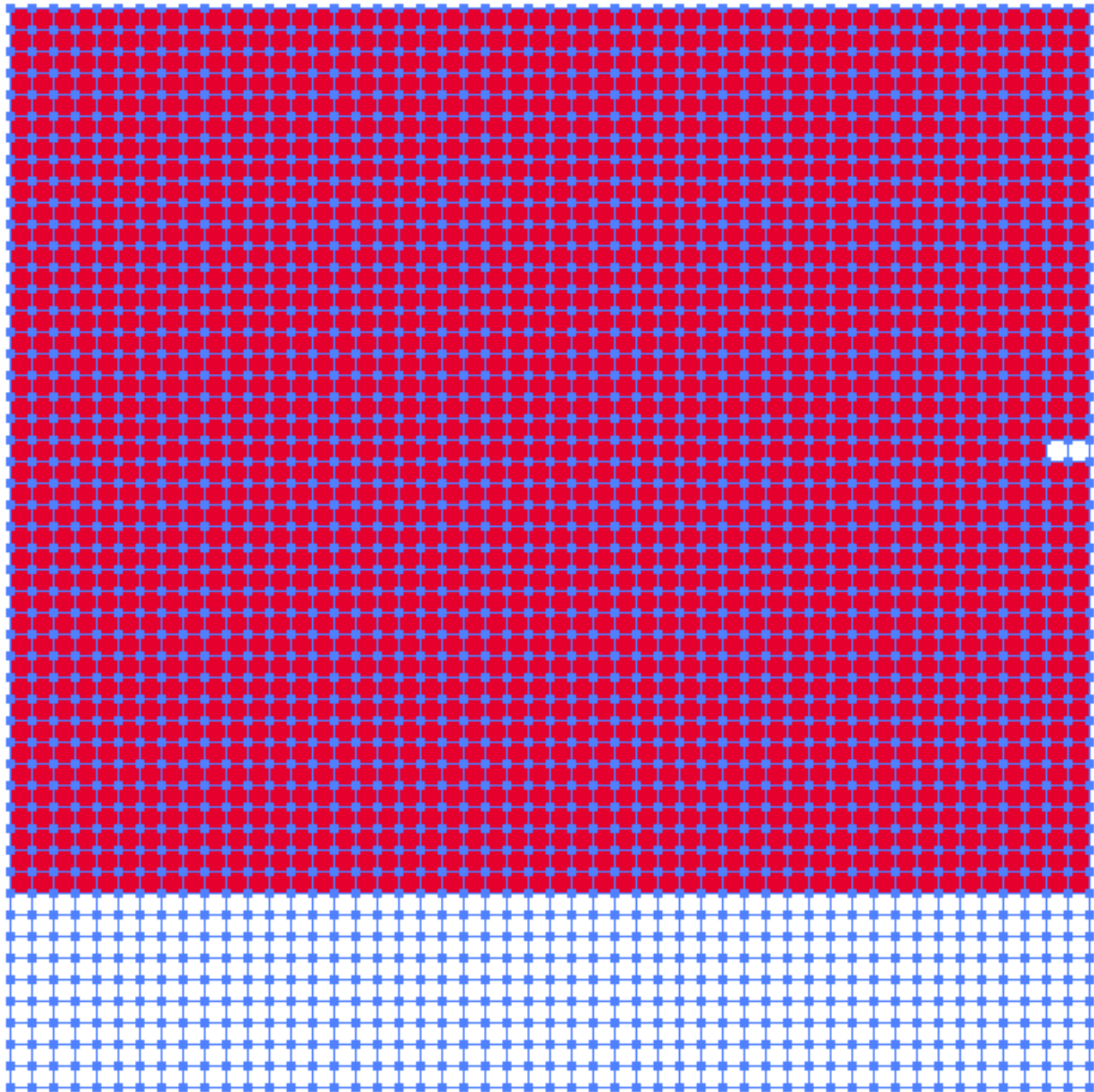
Day 11.3

$2^{11.3}$
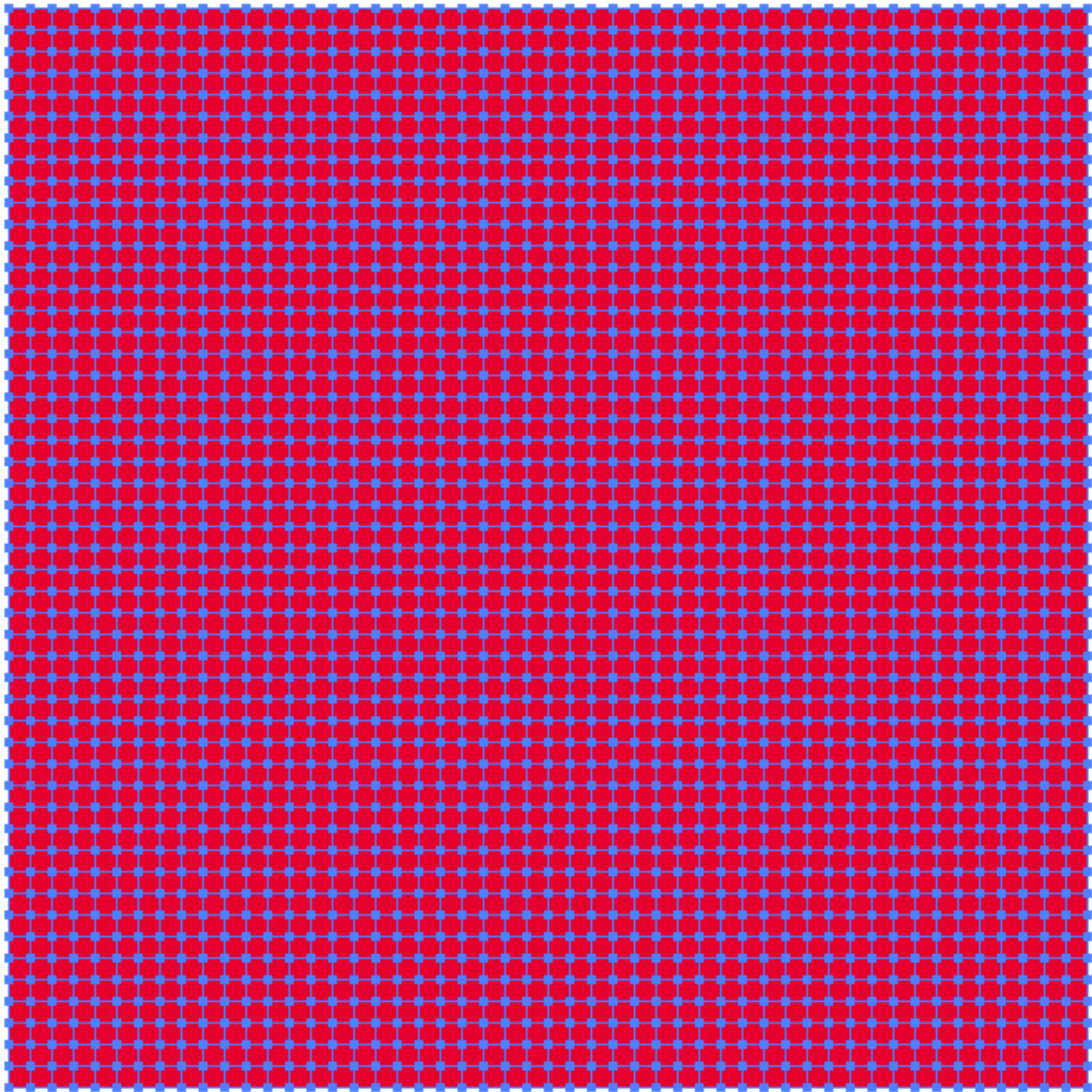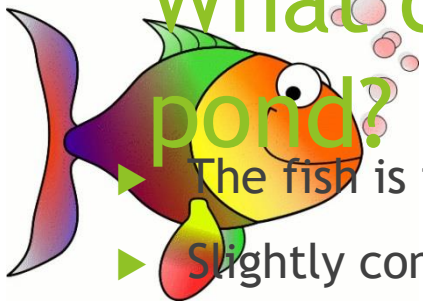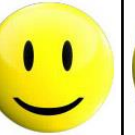
What does a fish feel in the pond?

- The fish is totally happy: < 25% covered
- Slightly concerned: > 25% covered
- Seriously concerned: > 50% covered
- Dead   100% covered

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 11 7 AM
🙂	🙂	🙂	🙂	🙂	🙂	🙂	🙂	🙂	😐	🙁	☠

An example of compounding working against us: COVID-19

Exercise: Folding papers

The thickness of a standard printing paper is about 0.1mm. Fold it once and it will be 0.2mm thick. If fold it again, it will be 0.4mm thick. Keeping folding it:

Times of Folding	The thickness of the Folded Paper
0	
1	
2	
7	
14	
21	
42	
50	

Exercise: Folding papers

The thickness of a standard printing paper is about 0.1mm. Fold it once and it will be 0.2mm thick. If fold it again, it will be 0.4mm thick. Keeping folding it:

Times of Folding	The thickness of the Folded Paper	2^x
0	0.1mm	0.1×2^0
1	0.2mm	0.1×2^1
2	0.4mm	0.1×2^2
7	128mm	0.1×2^7
14	1638.4mm = 1.63m	0.1×2^{14}
21	209715.2mm = 2,097m	0.1×2^{21}
42	4.4×10^{10}m	0.1×2^{42}
50	1.1×10^{13}m	0.1×2^{50}

7 FOLDS
NOTEBOOK
THICKNESS

14 FOLDS
AVERAGE PERSON'S
HEIGHT

17 FOLDS
HEIGHT OF A
TWO-STORY HOUSE

21 FOLDS
HEIGHT OF EMPIRE
STATE BUILDING

42 FOLDS
DISTANCE TO
THE MOON

50 FOLDS
DISTANCE TO
THE SUN

Exercise:

Calculate $1's worth at age 65 if investing the $1 at ages 20, 25, 30, 35, 40, 45, 50, 55

Starting Age of the $1 Investment	Ending Age of the $1 Investment	The Worth of $1 Investment At Ending Age
20	65	
25	65	
30	65	
35	65	
40	65	
45	65	
50	65	
55	65	

Starting Age of the $1 Investment	Ending Age of the $1 Investment	The Worth of $1 Investment At Ending Age
20	65	$13.76
25	65	$10.29
30	65	$7.69
35	65	$5.74
40	65	$4.29
45	65	$3.21
50	65	$2.40
55	65	$1.79

Start early / Make your retirement savings work hard for you

How much your dollar would be worth at age 65

$13.76

$10.29

$7.69

$5.74

$4.29

$3.21

$2.40

$1.79

20   25   30   35   40   45   50   55

Age when you invest $1

For illustrative purposes only. Assumes a 6% return.

Have you started saving or investing?

Compounding Problem:

John invested $2,000 each year from year 2011 for first 8 years of a 40-year period with an annual compound rate of 10%. Kevin started to invest $2,000 a year from 2019 with the same rate and he has planned to continue to do that until 2050. Who will earn more by the end of year 2050? By how much?

Year	Early Funding Contribution	Early Funding Year-End Value	Late Funding Contribution	Late Funding Year-End Value	Continual Funding Contribution	Continual Funding Year-End Value
1	$2,000	$2,200	$0	$0	$2,000	$2,200
2	$2,000	$4,620	$0	$0	$2,000	$4,620
3	$2,000	$7,282	$0	$0	$2,000	$7,282
4	$2,000	$10,210	$0	$0	$2,000	$10,210
5	$2,000	$13,431	$0	$0	$2,000	$13,431
6	$2,000	$16,974	$0	$0	$2,000	$16,974
7	$2,000	$20,871	$0	$0	$2,000	$20,871
8	$2,000	$25,158	$0	$0	$2,000	$25,158
9	$0	$27,674	$2,000	$2,200	$2,000	$29,874
10	$0	$30,441	$2,000	$4,620	$2,000	$35,061
11	$0	$33,485	$2,000	$7,282	$2,000	$40,767
12	$0	$36,834	$2,000	$10,210	$2,000	$47,044
13	$0	$40,517	$2,000	$13,431	$2,000	$53,948
14	$0	$44,569	$2,000	$16,974	$2,000	$61,643
15	$0	$49,026	$2,000	$20,871	$2,000	$69,897
16	$0	$53,929	$2,000	$25,158	$2,000	$79,087
17	$0	$59,322	$2,000	$29,874	$2,000	$89,196
18	$0	$65,254	$2,000	$35,061	$2,000	$100,316
19	$0	$71,779	$2,000	$40,767	$2,000	$112,548
20	$0	$78,957	$2,000	$47,044	$2,000	$126,003
21	$0	$86,853	$2,000	$53,948	$2,000	$140,803
22	$0	$95,583	$2,000	$61,643	$2,000	$157,083
23	$0	$105,092	$2,000	$69,897	$2,000	$174,991
24	$0	$115,601	$2,000	$79,087	$2,000	$194,690
25	$0	$127,161	$2,000	$89,196	$2,000	$216,359
26	$0	$139,877	$2,000	$100,316	$2,000	$240,195
27	$0	$153,865	$2,000	$112,548	$2,000	$266,415
28	$0	$169,252	$2,000	$126,003	$2,000	$295,257
29	$0	$186,177	$2,000	$140,803	$2,000	$326,983
30	$0	$204,795	$2,000	$157,083	$2,000	$361,881
31	$0	$225,275	$2,000	$174,991	$2,000	$400,269
32	$0	$247,803	$2,000	$194,690	$2,000	$442,496
33	$0	$272,583	$2,000	$216,359	$2,000	$488,741
34	$0	$299,841	$2,000	$240,195	$2,000	$539,615
35	$0	$329,825	$2,000	$266,415	$2,000	$595,576
36	$0	$362,808	$2,000	$295,257	$2,000	$657,134
37	$0	$399,089	$2,000	$326,983	$2,000	$724,847
38	$0	$438,998	$2,000	$361,881	$2,000	$799,332
39	$0	$482,898	$2,000	$400,269	$2,000	$881,265
40	$0	$531,188	$2,000	$442,496	$2,000	$971,339
Investment		$16,000		$64,000		$80,000
Earnings		$515,188		$374,496		$891,339

When to start investing matters!!!
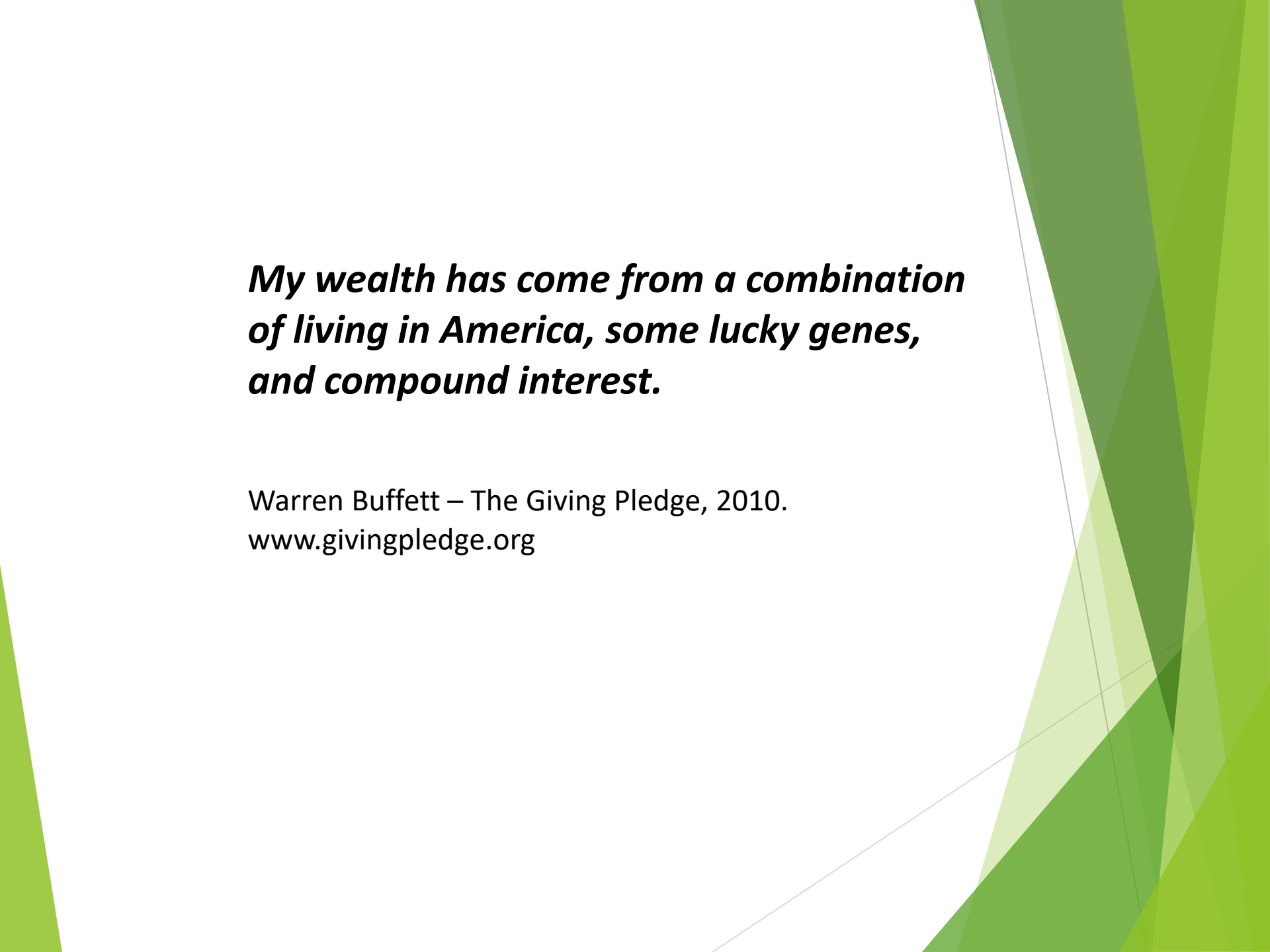
Assumptions: Same annual return of 10% (not guaranteed)

Table 1

Years	Principle	Deferred Growth
1	12000	13,200
2	12000	27,720
3	12000	43,692
4	12000	61,261
5	12000	80,587
6	12000	101,846
7	12000	125,231
8	12000	150,954
9	12000	179,249
10	12000	210,374
11		231,411
12		254,553
13		280,008
14		308,009
15		338,809
16		372,690
17		409,959
18		450,955
19		496,051
20		545,656
21		600,222
22		660,244
23		726,268
24		798,895
25		878,784
26		966,663
27		1,063,329
28		1,169,662
29		1,286,628
30		**1,415,291**

Table 2

Years	Principle	Deferred Growth
1	12000	13,200
2	12000	27,720
3	12000	43,692
4	12000	61,261
5	12000	80,587
6	12000	101,846
7	12000	125,231
8	12000	150,954
9	12000	179,249
10	12000	210,374
11	12000	244,611
12	12000	282,273
13	12000	323,700
14	12000	369,270
15	12000	419,397
16	12000	474,536
17	12000	535,190
18	12000	601,909
19	12000	675,300
20	12000	756,030
21		831,633
22		914,796
23		1,006,276
24		1,106,904
25		1,217,594
26		1,339,353
27		1,473,289
28		1,620,617
29		1,782,679
30		**1,960,947**

Table 3

Years	Principle	Deferred Growth
1	12000	13,200
2	12000	27,720
3	12000	43,692
4	12000	61,261
5	12000	80,587
6	12000	101,846
7	12000	125,231
8	12000	150,954
9	12000	179,249
10	12000	210,374
11	12000	244,611
12	12000	282,273
13	12000	323,700
14	12000	369,270
15	12000	419,397
16	12000	474,536
17	12000	535,190
18	12000	601,909
19	12000	675,300
20	12000	756,030
21	12000	844,833
22	12000	942,516
23	12000	1,049,968
24	12000	1,168,165
25	12000	1,298,181
26	12000	1,441,199
27	12000	1,598,519
28	12000	1,771,571
29	12000	1,961,928
30	12000	**2,171,321**

My wealth has come from a combination of living in America, some lucky genes, and compound interest.

Warren Buffett – The Giving Pledge, 2010.
www.givingpledge.org

The amount of initial investment matters!!!

Years	Principle	Deferred Growth
1	12000	13,200
2	12000	27,720
3	12000	43,692
4	12000	61,261
5	12000	80,587
6	12000	101,846
7	12000	125,231
8	12000	150,954
9	12000	179,249
10	12000	210,374
11		231,411

- Accounts allowing only low annual contributions
- Only saving low amount yearly

Years		Deferred Growth
18		450,955
19		496,051
20		545,656
21		600,222
22		660,244
23		726,268
24		798,895
25		878,784
26		966,663
27		1,063,329
28		1,169,662
29		1,286,628
30		**1,415,291**

Years	Principle	Deferred Growth
1	40000	44,000
2	40000	92,400
3	40000	145,640
4		160,204
5		176,224
6		193,847
7		213,232
8		234,555
9		258,010
10		283,811
11		312,192

- Accounts allowing only high annual contributions
- Saving in higher amount yearly

Years		Deferred Growth
18		608,374
19		669,212
20		736,133
21		809,746
22		890,721
23		979,793
24		1,077,772
25		1,185,550
26		1,304,105
27		1,434,515
28		1,577,967
29		1,735,763
30		**1,909,340**

Assumptions: Same total principle $120K, Same annual return of 10% (not guaranteed)

With compounding, how many years would it take for your money to double?

Rule of 72

• Divide 72 by the interest rate to estimate the number of years it takes for your money to double.

$$\frac{18}{4\overline{)72}}$$

$$FV = PV \cdot (1 + i)^n$$

$$\frac{6}{12\overline{)72}}$$

Age	4%	Age	6%	Age	8%	Age	12%
						29	
29	$10,000	29	$10,000	29	$10,000	35	$10,000
47	$20,000	41	$20,000	38	$20,000	41	$20,000
65	$40,000	53	$40,000	47	$40,000	47	$40,000
		65	$80,000	56	$80,000	53	$80,000
				65	$160,000	59	$160,000
						65	$320,000
							$640,000

* All figures are for illustrative purposes only and do not reflect an actual investment in any product. They do not reflect the performance risks, expenses or charges associated with any actual investment. Past performance is not an indication of future performance. The Rule of 72 is a mathematical concept that approximates the number of years it would take to double the principal at a constant rate of return. The performance of investments fluctuates over time, and as a result, the actual time it will take an investment to double in value cannot be predicted with any certainty. Additionally, there are no guarantees that any investment or savings program can out-pace inflation.

Rule of 72

•Divide 72 by the interest rate to estimate the number of years it takes for your money to double.

$$\frac{18}{4\overline{)72}} \qquad FV = PV \cdot (1+i)^n \qquad \frac{6}{12\overline{)72}}$$

Age	4%	Age	6%	Age	8%	Age	12%
						29	
29	$10,000	29	$10,000	29	$10,000	35	$10,000
47	$20,000	41	$20,000	38	$20,000	41	$20,000
65	$40,000	53	$40,000	47	$40,000	47	$40,000
		65	$80,000	56	$80,000	53	$80,000
				65	$160,000	59	$160,000
						65	$320,000
							$640,000

* All figures are for illustrative purposes only and do not reflect an actual investment in any product. They do not reflect the performance risks, expenses or charges associated with any actual investment. Past performance is not an indication of future performance. The Rule of 72 is a mathematical concept that approximates the number of years it would take to double the principal at a constant rate of return. The performance of investments fluctuates over time, and as a result, the actual time it will take an investment to double in value cannot be predicted with any certainty. Additionally, there are no guarantees that any investment or savings program can out-pace inflation.

"The Rule of 72":

Simply assume a reasonable rate of return for planning purposes (between 7 percent and 9 percent over a multidecade time period) and divide 72 by that rate. This calculates the period of time it would take for your money to double.

Note: The Rule of 72 is an approximation. The equation is $2 = 1 \times (1 + \text{Rate of Return})^Y$, where Y is the time to double.
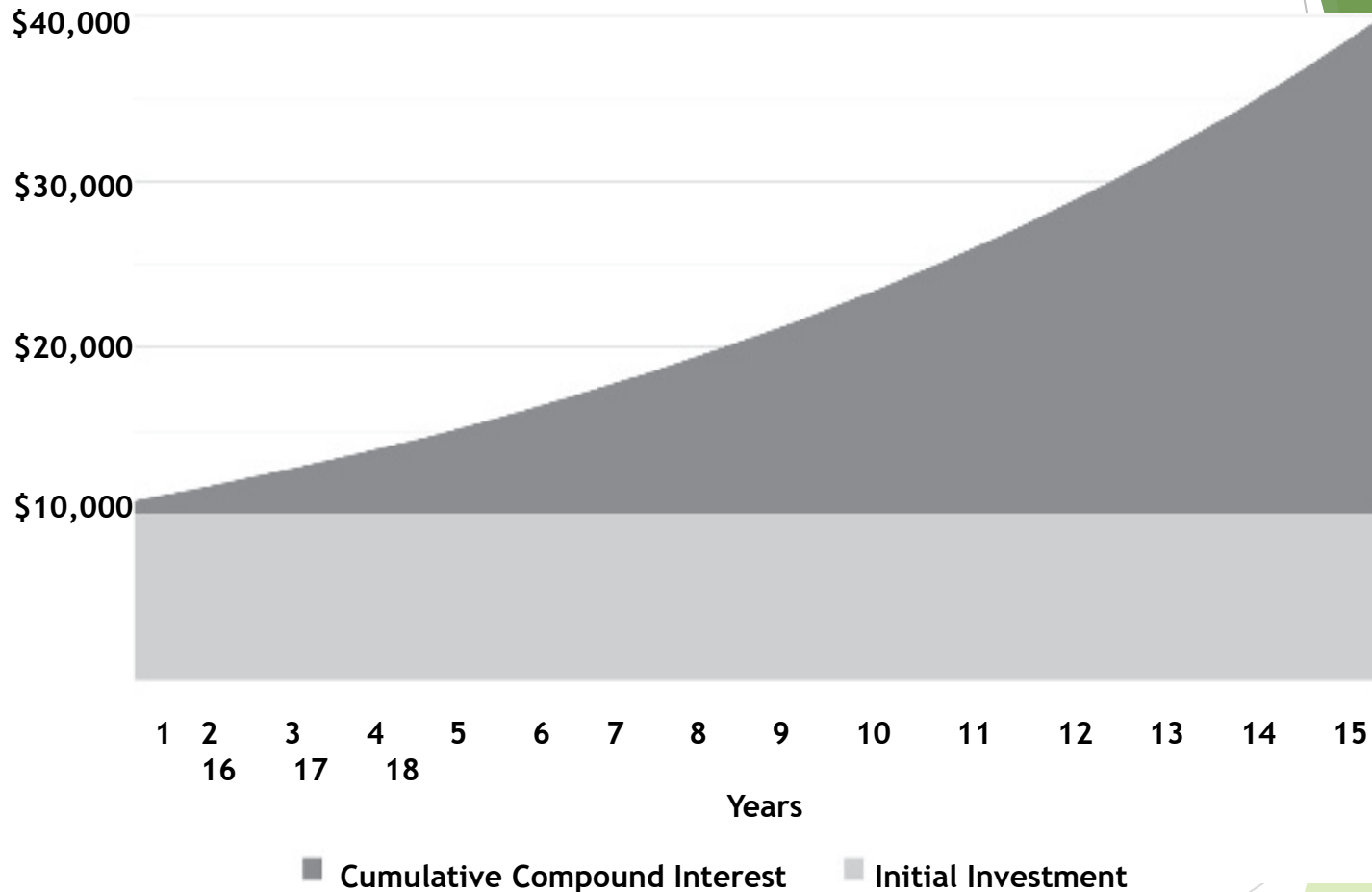
GROWTH OF $10,000 INVESTMENT WITH AN 8 PERCENT RETURN: IN I T I A L INVESTMENT VERSUS CUMULATI V E COMPOUND I NTEREST

Warren Buffett says, "Life is like a snowball. The important thing is finding wet snow and a long hill":

❖ The wet snow is the interest you reinvest to pick up even more interest as you roll along.
❖ The long hill is the multiple decades you give yourself if you start saving early.

▶ **The formula for compound interest is:**

$$A = P \left(1 + r/n\right)^{nt}$$

Where:

A = the future value of the investment/loan, including interest

P = the principal investment amount (the initial deposit or loan amount)

r = the annual interest rate or return

n = the number of times that interest is compounded per unit t

t = the time the money is invested or borrowed for

Compounding Summary

❖ T, when to invest matters.

❖ P, the amount of initial investment matters.

❖ R, the interest or return rate matters.

Compounding Summary

* It could be your BEST friend (wealth/business)
* It could be your WORST enemy (tax/COVID)

* Compounding Power comes at late stage
* How to manage life/study/investment?

* Understand its power and make use of it
* Success is not far away

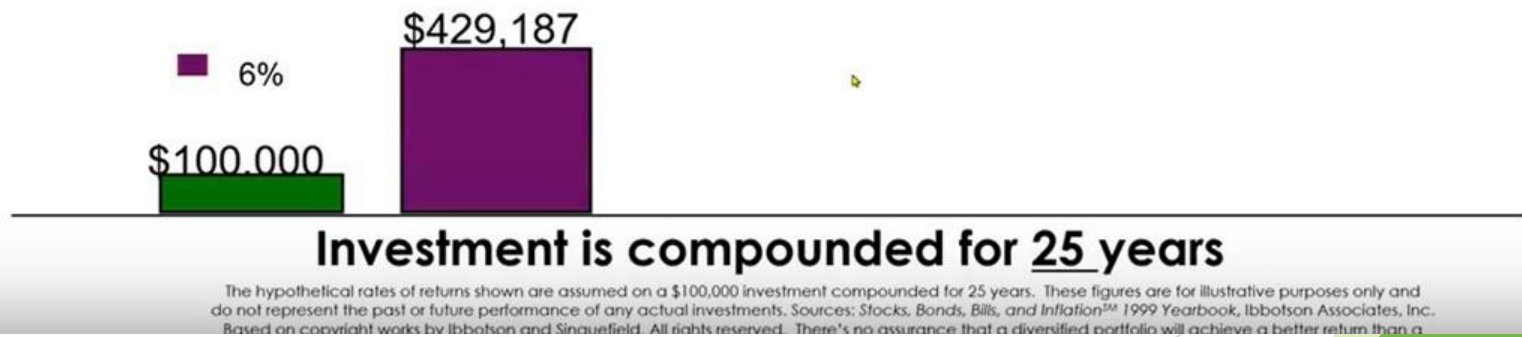# 投资基本法则 - 分散

$100,000

投资基本法则 - 分散

$429,187

■ 6%

$100,000

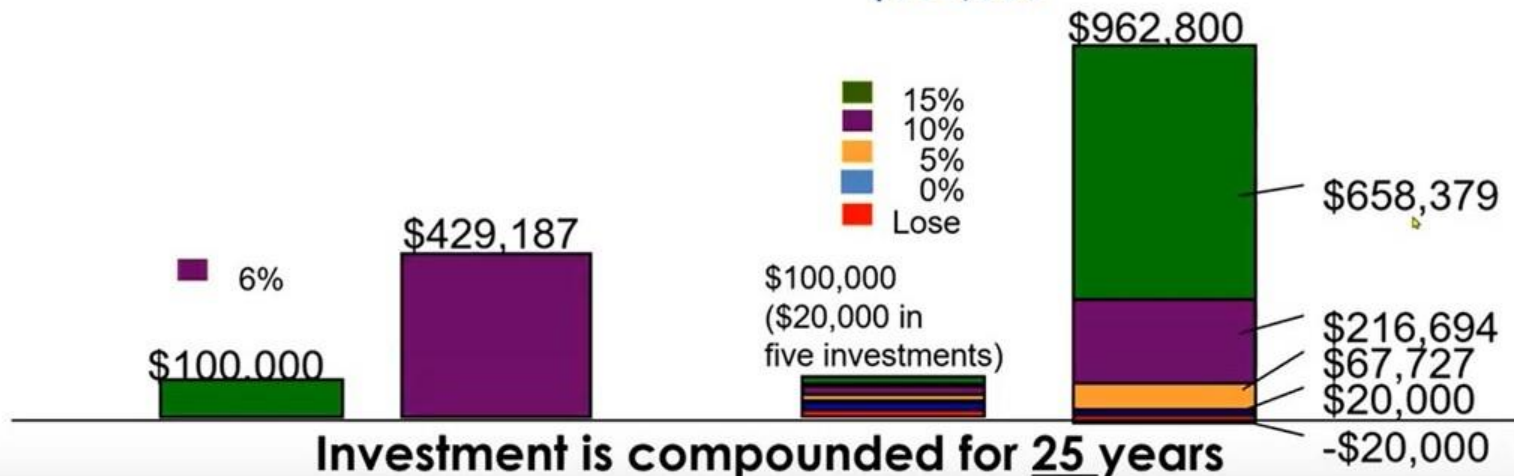## Investment is compounded for 25 years

投资基本法则 – 分散

INVESTOR 1

$100,000 in a single investment earning 6% per year grows to:

$429,187

INVESTOR 2

$100,000 in five investments; three yield poor results, but portfolio grows to:

$962,800

$962,800

- 15%
- 10%
- 5%
- 0%
- Lose

$658,379

6%

$429,187

$216,694
$67,727
$20,000

$100,000
($20,000 in
five investments)

$100,000

-$20,000

Investment is compounded for 25 years

The hypothetical rates of returns shown are assumed on a $100,000 investment compounded for 25 years. These figures are for illustrative purposes only and do not represent the past or future performance of any actual investments. Sources: Stocks, Bonds, Bills, and Inflation℠ 1999 Yearbook, Ibbotson Associates, Inc. Based on copyright works by Ibbotson and Sinquefield. All rights reserved. There's no assurance that a diversified portfolio will achieve a better return than a

资产种类分散

Source: Bloomberg, FactSet, MSCI, NAREIT, Russell, Standard & Poor's, J.P. Morgan Asset Management.
Large cap: S&P 500, Small cap: Russell 2000, EM Equity: MSCI EME, DM Equity: MSCI EAFE, Comdty: Bloomberg Commodity Index, High Yield: Bloomberg Global HY Index, Fixed Income: Bloomberg US Aggregate, REITs: NAREIT Equity REIT Index, Cash: Bloomberg 1-3m Treasury. The "Asset Allocation" portfolio assumes the following weights: 25% in the S&P 500, 10% in the Russell 2000, 15% in the MSCI EAFE, 5% in the MSCI EME, 25% in the Bloomberg US Aggregate, 5% in the Bloomberg 1-3m Treasury, 5% in the Bloomberg Global High Yield Index, 5% in the Bloomberg Commodity Index and 5% in the NAREIT Equity REIT Index. Balanced portfolio assumes annual rebalancing. Annualized (Ann.) return and volatility (Vol.) represents period from 12/31/2007 to 12/31/2022. Please see disclosure page at end for index definitions. All data represents total return for stated period. The "Asset Allocation" portfolio is for illustrative purposes only. Past performance is not indicative of future returns.
Guide to the Markets – U.S. Data are as of August 29, 2023.

J.P.Morgan
ASSET MANAGEMENT

Dollar-cost averaging is a mathematical concept for periodic investing based on a long-term fluctuating market. Dollar-cost averaging does not assure a profit and does not protect against a loss in declining markets. Because of fluctuating prices, investors should consider their ability to continue purchases through periods of both high and low price levels. These are hypothetical examples for illustrative purposes only, and do not reflect the actual investment in any product.

Dollar-cost averaging in a rising market
- Assumes an investment of $200 per month
- Accumulated units   85
- Average Share Price $15.00
- **Liquidation value**
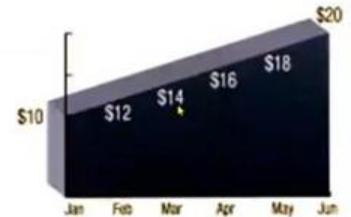
Dollar-cost averaging in a fluctuating market
- Assumes an investment of $200 per month
- Accumulated units   170
- Average Share Price $7.67
- **Liquidation value**

Dollar-cost averaging in a declining market
- Assumes an investment of $200 per month
- Accumulated units   535
- Average Share Price $4.83
- **Liquidation value**
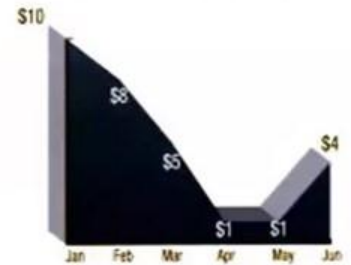
投资基本法则 - 定投

Dollar-cost averaging is a mathematical concept for periodic investing based on a long-term fluctuating market. Dollar-cost averaging does not assure a profit and does not protect against a loss in declining markets. Because of fluctuating prices, investors should consider their ability to continue purchases through periods of both high and low price levels. These are hypothetical examples for illustrative purposes only, and do not reflect the actual investment in

Dollar-cost averaging in a rising market
- Assumes an investment of $200 per month
- Accumulated units 85
- Average Share Price $15.00
- **Liquidation value** **$1,700** (85 x $20)
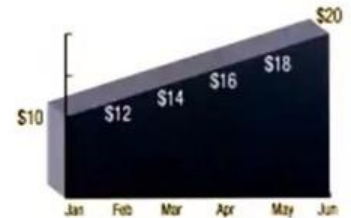
Dollar-cost averaging in a fluctuating market
- Assumes an investment of $200 per month
- Accumulated units 170
- Average Share Price $7.67
- **Liquidation value** **$1,700** (170 x $10)

Dollar-cost averaging in a declining market
- Assumes an investment of $200 per month
- Accumulated units 535
- Average Share Price $4.83
- **Liquidation value** **$2,140** (535 x $4)

投资基本法则 - 定投

Month	Y	Market	Principle	Shares	Cash Value
0	0.00	10.0	1000	100	
1	1.50	11.5	1000	87	
2	2.60	12.6	1000	79	
3	3.00	13.0	1000	77	
4	2.60	12.6	1000	79	
5	1.50	11.5	1000	87	
6	0.00	10.0	1000	100	
7	-1.50	8.5	1000	118	
8	-2.60	7.4	1000	135	
9	-3.00	7.0	1000	143	
10	-2.60	7.4	1000	135	
11	-1.50	8.5	1000	118	
12	0.00	10.0	1000	100	
	Degree of Fluctuation		Total Principle	Ending Value	
	3		13000	13579	
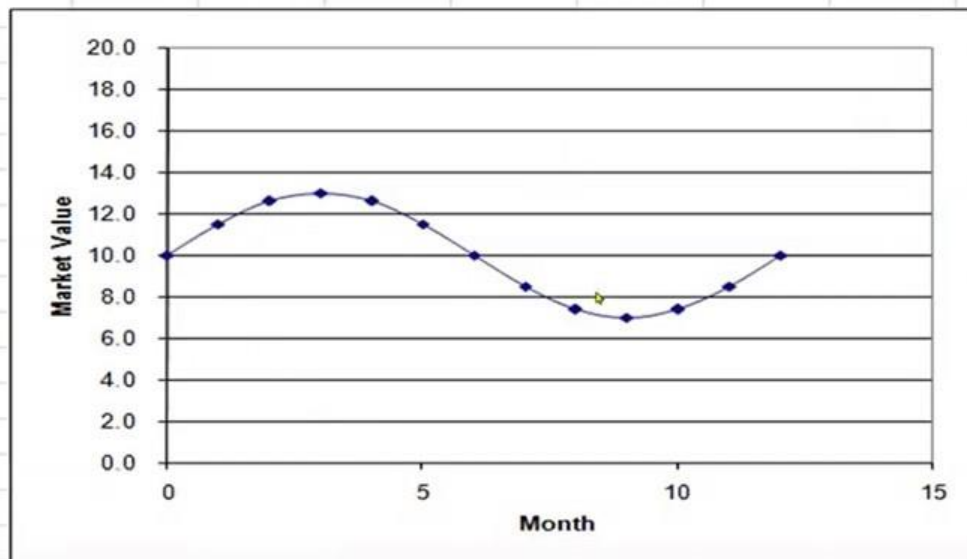
投资基本法则 - 定投

Month	Y	Market	Principle	Shares	Cash Value
0	0.00	10.0	1000	100	
1	3.00	13.0	1000	77	
2	5.20	15.2	1000	66	
3	6.00	16.0	1000	63	
4	5.20	15.2	1000	66	
5	3.00	13.0	1000	77	
6	0.00	10.0	1000	100	
7	-3.00	7.0	1000	143	
8	-5.20	4.8	1000	208	
9	-6.00	4.0	1000	250	
10	-5.20	4.8	1000	208	
11	-3.00	7.0	1000	143	
12	0.00	10.0	1000	100	
	Degree of Fluctuation		Total Principle	Ending Value	
	6		13000	16000	
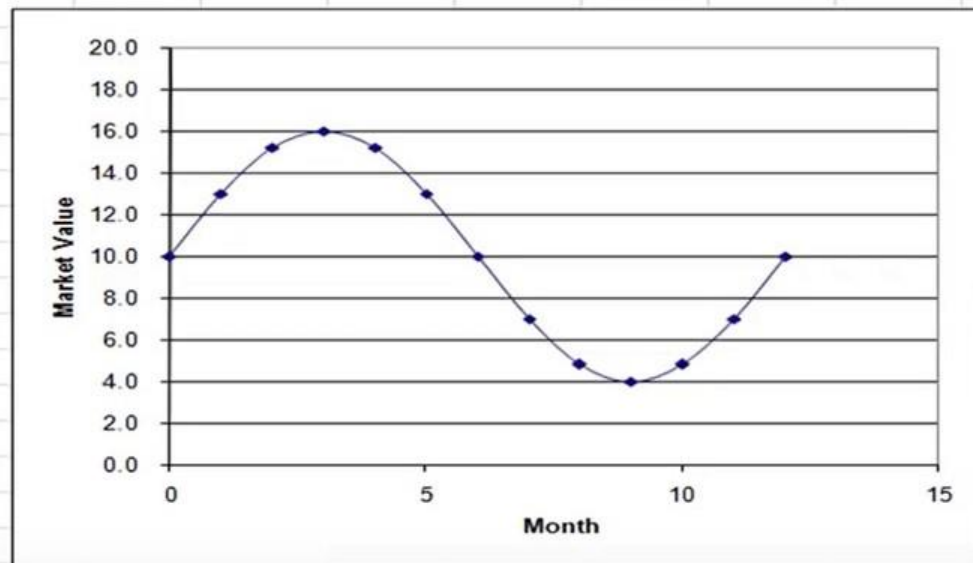
投资基本法则 - 定投

Month	Y	Market	Principle	Shares	Cash Value
0	0.00	10.0	1000	100	
1	4.50	14.5	1000	69	
2	7.79	17.8	1000	56	
3	9.00	19.0	1000	53	
4	7.79	17.8	1000	56	
5	4.50	14.5	1000	69	
6	0.00	10.0	1000	100	
7	-4.50	5.5	1000	182	
8	-7.79	2.2	1000	453	
9	-9.00	1.0	1000	1000	
10	-7.79	2.2	1000	453	
11	-4.50	5.5	1000	182	
12	0.00	10.0	1000	100	
	Degree of Fluctuation		Total Principle	Ending Value	
	9		13000	28733	
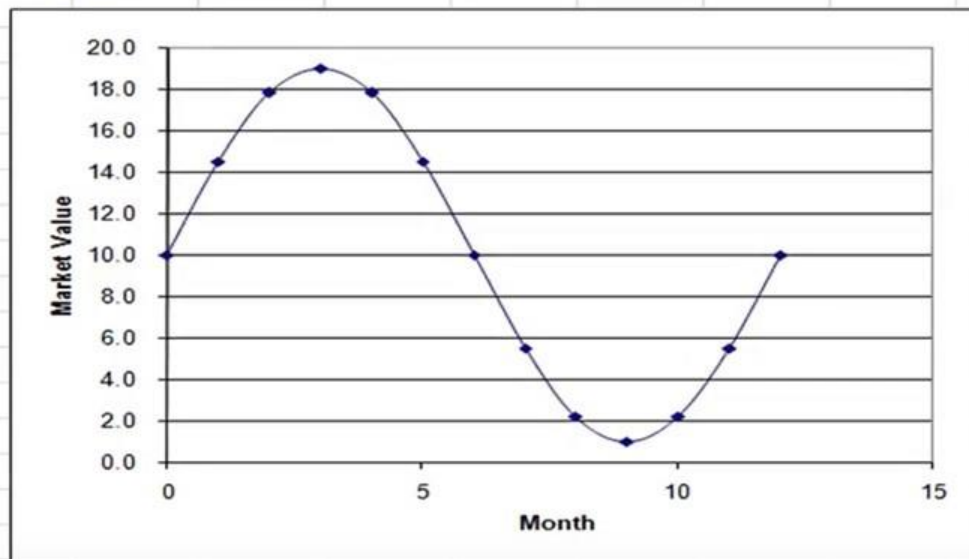
投资基本法则 - 定投

投资基本法则 - 定投
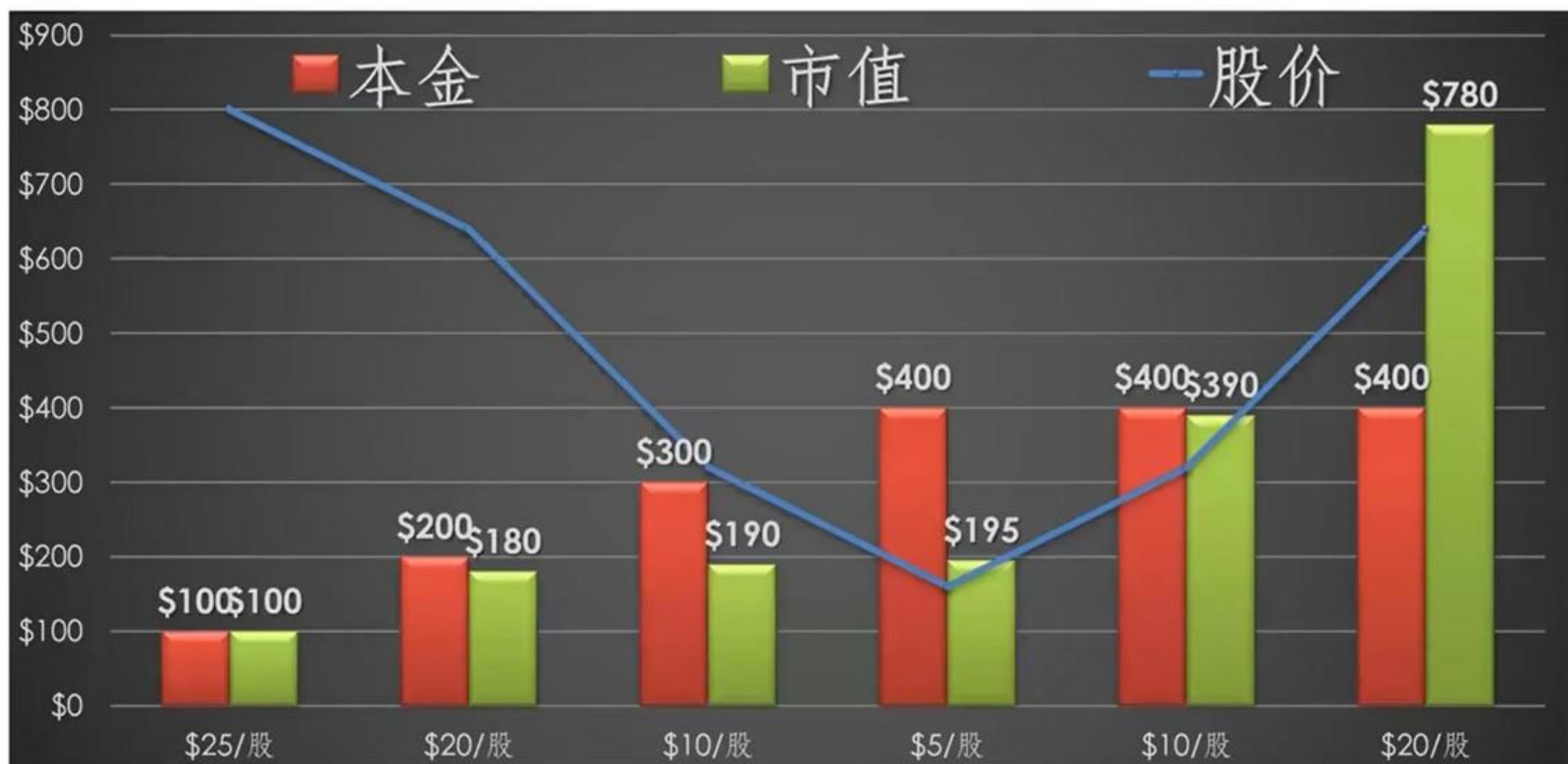
投资基本法则 -长期

$10,000 investment made on December 31, 1999, through December 31, 2019, would have grown to $32,527.

5036个交易日

Source: Legg Mason.

Past performance is no guarantee of future results. These charts and references are for illustrative purposes only and do not represent an actual investment or the performance of any specific investment. The **S&P 500** Index is an unmanaged index of 500 stocks that is generally representative of the performance of larger companies in the U.S. An investor cannot invest directly in an index. Unmanaged index returns do not reflect any fees, expenses or sales charges. Dividends are subject to reinvestment.

投资基本法则 – 长期

$10,000 investment made on December 31, 1999, through December 31, 2019, would have grown to $32,527.

5036个交易日

- An investment would be worth ($)
- Annualized returns (%)

| +6.07 | +2.45 | +.10 | -1.93 | -3.79 | -5.45 | -12.06 |

Your initial investment

Days missed

Source: Legg Mason.

Past performance is no guarantee of future results. These charts and references are for illustrative purposes only and do not represent an actual investment or the performance of any specific investment. The **S&P 500** index is an unmanaged index of 500 stocks that is generally representative of the performance of larger companies in the U.S. An investor cannot invest directly in an index. Unmanaged index returns do not reflect any fees, expenses or sales charges. Dividends are subject to reinvestment.

Best Days Come Near the Worst
Despite 2008 being in the center of the Great Recession, it had 8 of the 20 best price return days for the S&P 500 since 1928.

Positive Days: 12%, 5%, -5%, -9% Negative Days

September 2008, October 2008, November 2008, December 2008

投资基本法则 – 长期

Worst-day investments (market highs)				Best-day investments (market lows)		
Date of market high	Cumulative investment[2]	Value on 12/31		Date of market low	Cumulative investment[2]	Value on 12/31
5/21/01	$10,000	$9,229		9/21/01	$10,000	$11,409
3/19/02	20,000	16,174		10/9/02	20,000	21,119
12/31/03	30,000	30,457		3/11/03	30,000	40,492
12/28/04	40,000	43,478		10/25/04	40,000	55,440
3/4/05	50,000	57,060		4/20/05	50,000	70,546
12/27/06	60,000	76,227		1/20/06	60,000	93,355
10/9/07	70,000	90,340		3/5/07	70,000	109,934
5/2/08	80,000	65,874		11/20/08	80,000	83,667
12/30/09	90,000	93,888		3/9/09	90,000	122,620
12/29/10	100,000	114,261		7/2/10	100,000	148,368
4/29/11	110,000	121,690		10/3/11	110,000	157,459
10/5/12	120,000	150,966		6/4/12	120,000	193,845
12/31/13	130,000	210,342		1/8/13	130,000	270,244
12/26/14	140,000	246,073		2/3/14	140,000	315,325
5/19/15	150,000	252,422		8/25/15	150,000	322,095
12/20/16	160,000	299,700		2/11/16	160,000	382,335
12/28/17	170,000	369,376		1/19/17	170,000	470,271
10/3/18	180,000	354,813		12/24/18	180,000	451,216
12/27/19	190,000	452,496		1/3/19	190,000	575,506
12/31/20	200,000	529,276		3/23/20	200,000	676,524
Average annual total return (5/21/01-12/31/20): 8.89%				Average annual total return (9/21/01-12/31/20): 10.95%		

Every year, for the past 20 years, he's invested $10,000 in ICA

投资基本法则 - 长期

Date	Action	Symbol	Quantity	Price	Amount
4/3/2025	Buy	BAC	500	$37.18	($18,587.50)
4/4/2025	Buy	BAC	1,000	$34.50	($34,497.64)
4/8/2025	Buy	BAC	500	$34.42	($17,210.00)
4/8/2025	Buy	BAC	500	$35.65	($17,823.00)
4/8/2025	Sell	BAC	1,000	$36.86	$36,853.81
4/9/2025	Sell	BAC	499	$37.38	$18,649.53
4/9/2025	Sell	BAC	1	$37.42	$37.42
4/9/2025	Sell	BAC	500	$37.19	$18,594.40
4/9/2025	Sell	BAC	500	$36.27	$18,131.92
4/9/2025	Buy	BAC	500	$33.45	($16,722.50)
4/10/2025	Sell	BAC	500	$35.71	$17,854.66
4/10/2025	Sell	BAC	500	$35.24	$17,619.48
4/10/2025	Buy	BAC	500	$34.78	($17,387.50)
4/10/2025	Buy	BAC	500	$35.10	($17,549.05)
4/10/2025	Buy	BAC	500	$35.60	($17,798.97)
4/14/2025	Sell	BAC	500	$36.78	$18,389.41
4/15/2025	Sell	BAC	500	$38.35	$19,174.39
4/16/2025	Buy	BAC	500	$37.00	($18,500.00)
4/16/2025	Buy	BAC	500	$37.33	($18,664.95)
4/17/2025	Sell	BAC	500	$37.75	$18,876.20
4/21/2025	Buy	BAC	500	$36.86	($18,428.15)
4/22/2025	Sell	BAC	500	$38.12	$19,060.84
4/22/2025	Sell	BAC	500	$37.94	$18,966.89
Total					**$9,039.00**
				87130	10.37%

退休计划的五个投资基本法则

❖早投 （Invest earlier）--- by compounding rules，尽可能多投
❖分散 （Diversification）
❖定投 （Dollar cost averaging) --- not timing the market
❖长期 （Time in the market not timing the market）--- 不随市场变化

❖保本 （Downside protection）

我们的退休计划
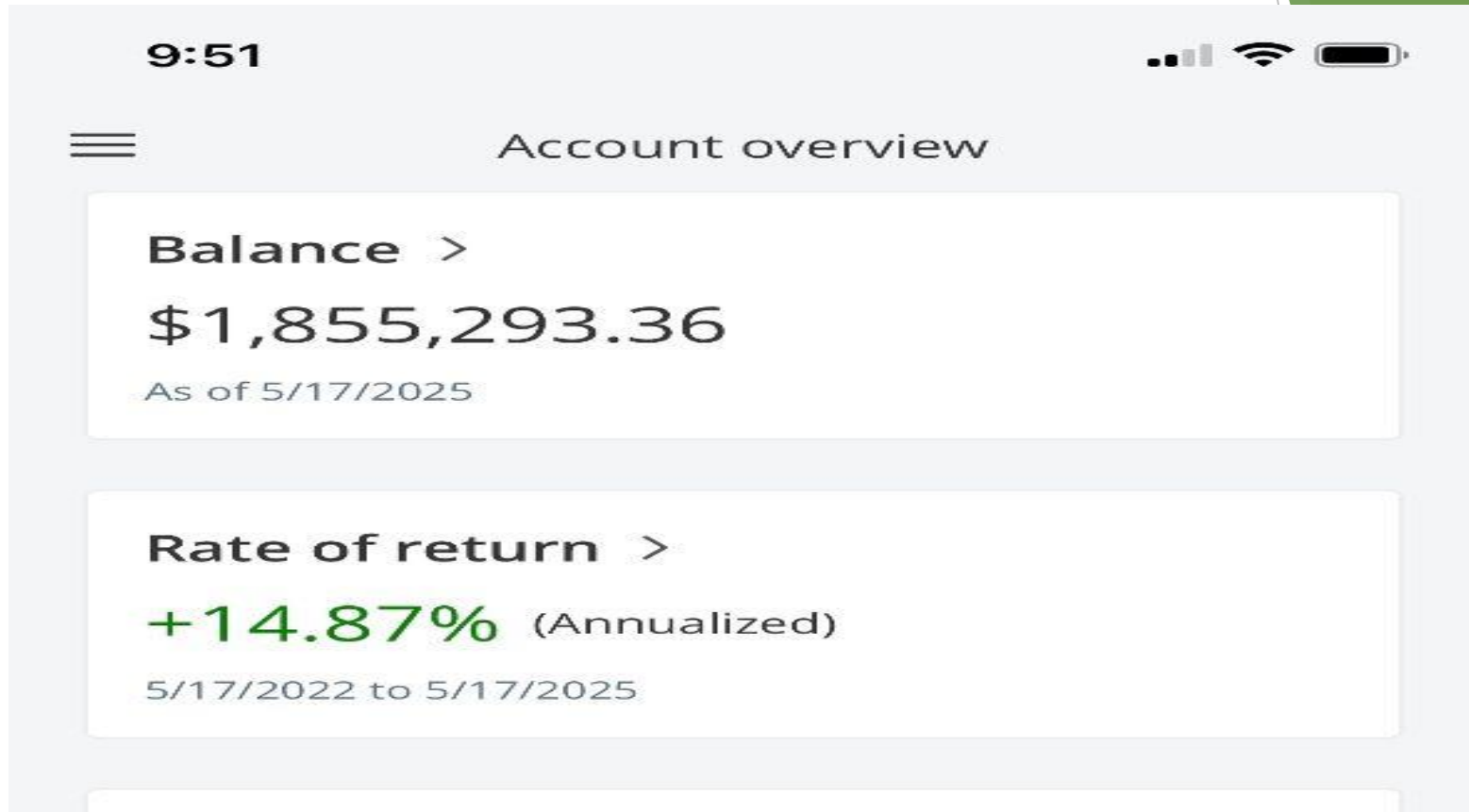
❖ Started from June 2004
❖ To 2012, invested full amount allowed + employer match
❖ From 2012 to 2023, invested $15,000 annually + employer match

我们的退休计划

Formula:

$$P = d * ((1 + r/k)^{(Nk)} - 1) / (r/k)$$

Where: P = Final balance after N years, d = Regular contribution (annual), r = Annual interest rate, k = Number of compounding periods per year, and N = Number of years.

我们的退休计划

Example：

Let's say you contribute $5,000 annually, expect an 8% annual return, and plan to invest for 20 years. Assuming annual compounding (k=1):

P = 5000 * ((1 + 0.08)^20 - 1) / 0.08
P ≈ $327,331.70

我们的退休计划

https://www.fidelitybanker.com/calculator/retire-401k

我们的退休计划

www.fidelitybanker.com/calculator/retire-401k 67%

FidelityBank

SERVICES   ACCOUNTS   LOANS   COMMUNITY   ABOUT US   LOGIN

Your total is $1,813,066.58 after 20 years.

* Indicates Required.

401(K) EMPLOYEE SAVINGS PLAN:

Field	Value				
Percent to contribute:* ?	20%	0%	33%	67%	100%
Annual salary:* ?	$80,000.00	$0	$10k	$100k	$1m
Annual salary increase:* ?	0%	0%	4%	8%	12%
Current age:* ?	30	15	40	65	90
Age at retirement:* ?	50	10	37	63	90
Current 401(k) balance:* ?	$1,000.00	$0	$100k	$1m	$10m
Annual rate of return:* ?	14%	0%	4%	8%	12%

Total employee contributions: $320,000.00

401(K) EMPLOYER MATCH:

Field	Value				
Employer match:* ?	50%	0%	134%	267%	400%
Employer match ends:* ?	6%	0%	33%	67%	100%

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5/18/2025

我们的退休计划

Historical 401(k) Contribution Limits			
Year	Employee Contribution	Employer Contribution	Total Contribution	Catch Up Contribution (Age 50+)
2024	$23,000	$46,000	$69,000	$7,500
2023	$22,500	$43,500	$66,000	$7,500
2022	$20,500	$40,500	$61,000	$6,500
2021	$19,500	$38,500	$58,000	$6,500
2020	$19,500	$37,500	$57,000	$6,500
2019	$19,000	$37,000	$56,000	$6,000
2018	$18,500	$36,500	$55,000	$6,000
2017	$18,000	$36,000	$54,000	$6,000
2016	$18,000	$35,000	$53,000	$6,000
2015	$18,000	$35,000	$53,000	$5,500
2014	$17,500	$34,500	$52,000	$5,500
2013	$17,000	$34,000	$51,000	$5,500
2012	$17,000	$33,000	$50,000	$5,500
2011 - 2009	$16,500	$32,500	$49,000	$5,500
2008	$15,500	$30,500	$46,000	$5,000
2007	$15,500	$29,500	$45,000	$5,000
2006	$15,000	$29,000	$44,000	$5,000
2005	$14,000	$28,000	$42,000	$4,000
2004	$13,000	$28,000	$41,000	$3,000

我们的退休计划

| Calendar Year | DB 415(b)(1)(A) | DC 415(c)(1)(A) | Maximum Deferral | | | | | | | Highly Compensated Definition Limits Under IRC 414(q) | Annual Comp Limit | Taxable Wage Base |
			401(k) & 402(g)(1)	Over 50 Catch-up Contribution	60-63 Catch-up Contribution	403(b)	SIMPLE	SIMPLE Over 50 Catch-up Contribution	457	(1)(B)	401(a)(17), 404(l), 408(k)(3)(C)	
2025	280,000	70,000	23,500	7,500	11,250	23,500	16,500	3,500	23,500	160,000	350,000	176,600
2024	275,000	69,000	23,000	7,500	n/a	23,000	16,000	3,500	23,000	155,000	345,000	168,600
2023	265,000	66,000	22,500	7,500	n/a	22,500	15,500	3,500	22,500	150,000	330,000	160,200
2022	245,000	61,000	20,500	6,500	n/a	20,500	14,000	3,000	20,500	135,000	305,000	147,000
2021	230,000	58,000	19,500	6,500	n/a	19,500	13,500	3,000	19,500	130,000	290,000	142,800
2020	230,000	57,000	19,500	6,500	n/a	19,500	13,500	3,000	19,500	130,000	285,000	137,700
2019	225,000	56,000	19,000	6,000	n/a	19,000	13,000	3,000	19,000	125,000	280,000	132,900
2018	220,000	55,000	18,500	6,000	n/a	18,500	12,500	3,000	18,500	120,000	275,000	128,400

我们的办公室

哥伦比亚，马里兰

盖城，马里兰

泰森，弗吉尼亚

底特律，密歇根

兰辛，密歇根

都柏林，俄亥俄

尔湾，加州

明尼唐卡，明尼苏达

达拉斯，德州

迈阿密，佛罗里达

您的三大福利

1. 免费家庭全盘财务和税务规划分析

- 理清财务状况，发现规划盲区
- 从六个方面（风险控制，税务规划，家庭保护，子女教育，退休养老，财富传承）给出具体建议

2. 注册成我们的学员（$125注册费）

- 终身免费的财商教育，分享理财师内部资料，系统的学习如何做好家庭财务规划
- 终身免费财务咨询，共享团队理财师，税务师，律师资源
- 需要实名注册，无犯罪破产记录

3. 加入北极星团队

- 世界500强金融服务平台支持，全牌照，独立理财师支持
- 时间投入灵活，可兼职开始
- 共同普及财商知识，服务广大中产阶级

Q&A?