

Future Value of an Annuity

$$FV = P \frac{(1+i)^n - 1}{i}$$

future value

Payment

i interest rate per period

n # of payments

* Present Value

$$PV = P \frac{1 - (1+i)^{-n}}{i}$$

Mattress

$$100(540) = \$54,000$$

\$100/month

Savings

$$FV = 100 \frac{\left(\left(1 + \frac{.02}{12} \right)^{540} - 1 \right)}{\left(\frac{.02}{12} \right)}$$

$$FV = \$87,465.67$$

45 years
540 months

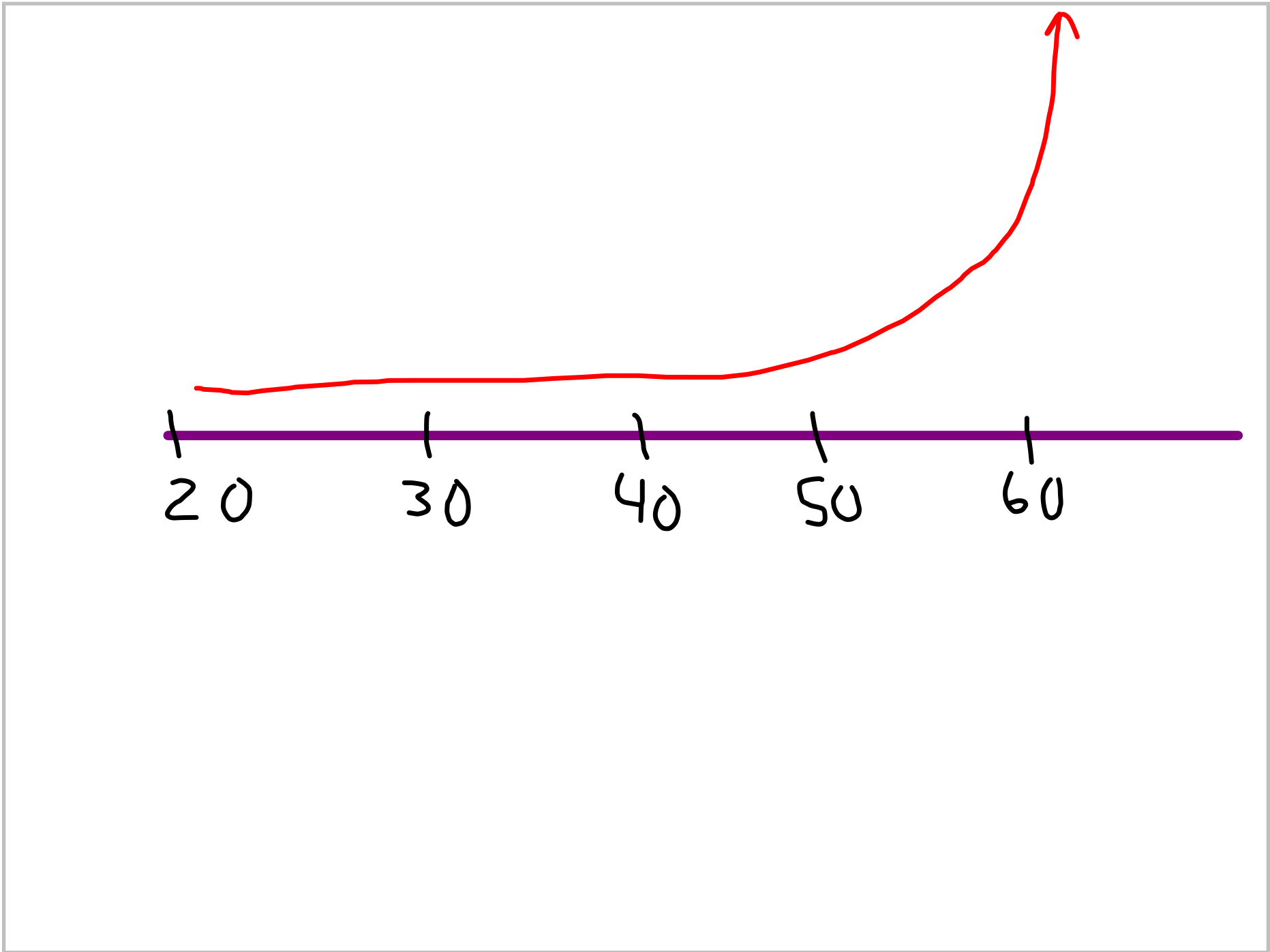
Mattress 0%

Savings 2%

Fund 12.5%

$$FUND = \$2,575,884.24$$

$$35\text{yrs} \quad \$735,958.54$$



~~\$53000~~

6% interest
30yr loan

\$38000/yr

\$3166/mth

afford 1055/mth
for House Pymt

$$1055 \left(1 - \left(1 + \frac{.06}{12} \right)^{-360} \right) / (.06/12)$$

175965

222,000

\$44000
CASH