If inflation is ____, how many years will it take purchasing power to be cut in half? (I.e., You need twice as much income to maintain the same standard of living.)

① Suppose Inflation = I/Y = 3%

PV = $1

FV = −$0.50

[PMT = 0]

I/Y = 3%

Cpt N = 23.45 years

② Suppose Inflation = I/Y = 4%

Same except

I/Y = 4%

Cpt N = 17.67 years

We're going to give you a one-time 36% raise because you haven't had a raise in 8 years. What is the average annual growth rate being given in this one-time increase?

PV = $100

FV = -$136

N = 8 yr

[PMT = 0]

Cpt I = 3.9%/yr

1000 Shares of Southwest stock purchased at the end of 1989 would cost $24,000. In 1999, the value of the 1000 shares would be $245,000.

What is your average annual stock growth over this decade?

PV = 24,000

FV = -245,000

[PMT = 0]

N = 10 years

Cpt I/Y = 26.15%

True or False (& why?)

The USPS has been increasing the price of a first-class stamp at an unfair rate. In 1919, it only cost 2¢. Eighty-three years later, they want 36¢.

PV = 2
FV = -36
N = 83yr
[PMT = ∅]

Cpt I = 3.54%

This was written before the increase amount was finalized. We know the increase amount was actually 37¢.

Change FV = -37
Cpt I = 3.577%

Time Value of Money Examples:

In 1992, Dow was at 3300. Ten years later, Dow is at 10,000. What is average annual increase?

PV = 3300
FV = 10,000
[PMT = ∅]
N = 10 years

Cpt I = 11.7%

If N = 8, then I = 14.9%

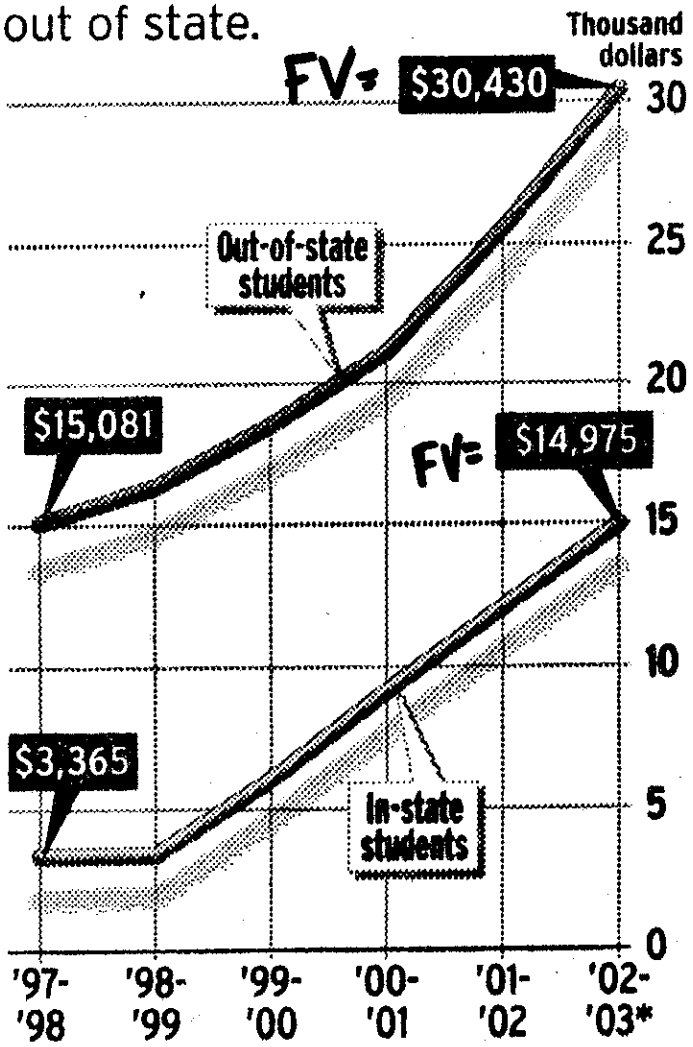
In 1992, there were 60 million women stockholders. In 2002, there are 80 million. What is the average annual increase in women stockholders over these 10 years?

PV = 60
FV = 80
[PMT = ∅]
N = 10 yr

Cpt I = 2.92%

THE PRICE OF AN MBA AT UNC-CH

Tuition bills have increased sharply at UNC-Chapel Hill's Kenan-Flagler Business School, especially for students from out of state.



* Includes increases approved by UNC and proposed in 2002-03 Senate budget

Source: Kenan-Flagler Business School

The News & Observer

N = 5 years
PMT = ϕ

Cpt I/Y = 15.07% → PV =

Cpt I/Y = 34.80% → PV =

The Gift-tax exclusion is finally $11,000.
The limit hadn't previously changed since 1982 when it was set at $10,000.
(In 1997, Congress passed a provision tying the threshhold to inflation, but only allowing increases in multiples of $1000.)

If the Gift-Tax had been allowed to be indexed to inflation since 1982, what would the threshold be now in 2002?
(Use Inflation = I/Y = 3.5%/year)

PV = 10,000
N = 20 years
I/Y = 3.5%/year
[PMT = 0]

Cpt FV = 19,897.89

Round down to 19[redacted],000 in 2002
Round up to 20,000 in 2003