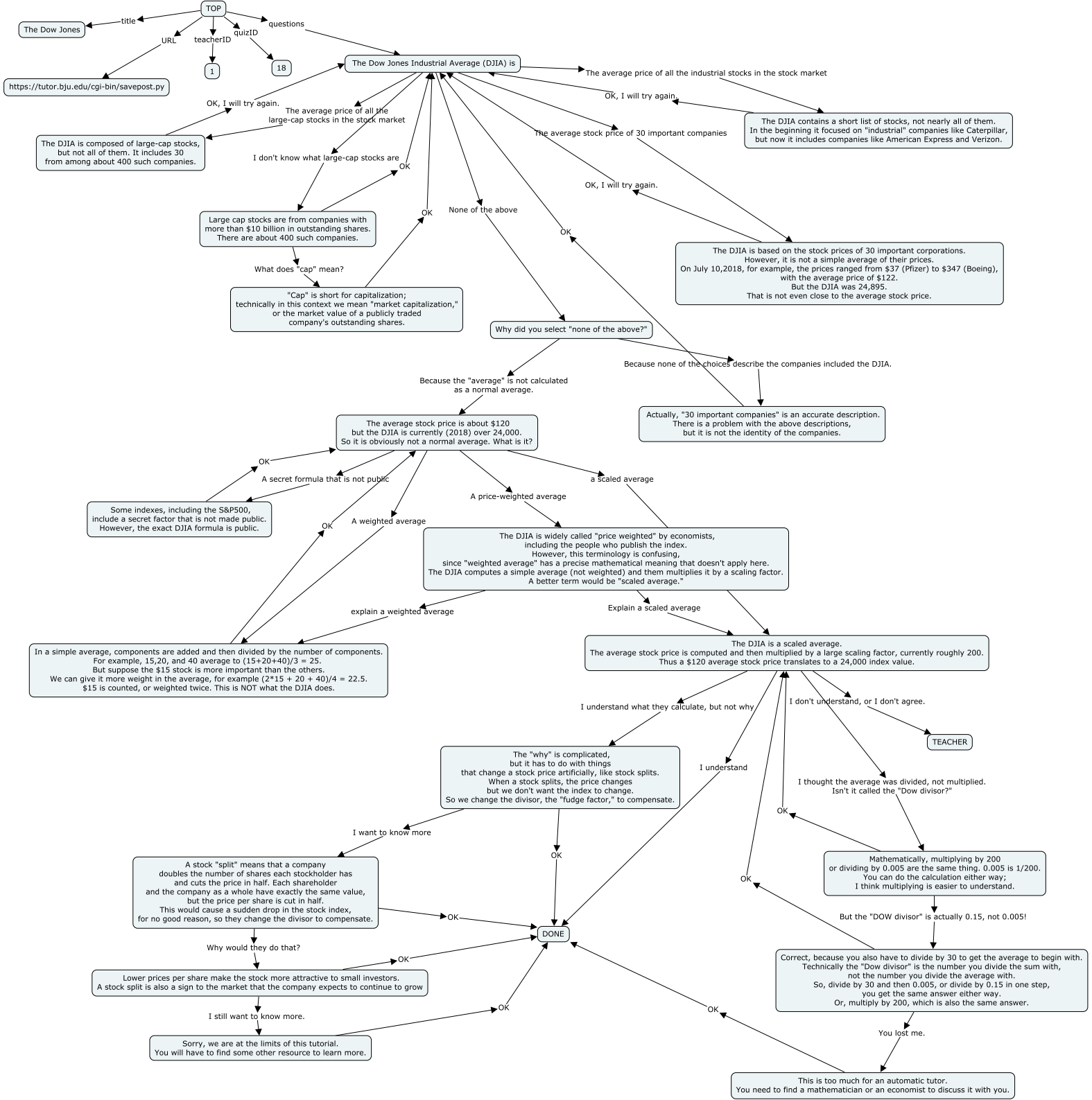
TOP
title
The Dow Jones
URL
https://tutor.bju.edu/cgi-bin/savepost.py
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questions
The Dow Jones Industrial Average (DJIA) is
The average price of all the industrial stocks in the stock market
The DJIA contains a short list of stocks, not nearly all of them.
In the beginning it focused on "industrial" companies like Caterpillar,
but now it includes companies like American Express and Verizon.
OK, I will try again.
The average price of all the
large-cap stocks in the stock market
The DJIA is composed of large-cap stocks,
but not all of them. It includes 30
from among about 400 such companies.
OK, I will try again.
I don't know what large-cap stocks are
Large cap stocks are from companies with
more than $10 billion in outstanding shares.
There are about 400 such companies.
OK
What does "cap" mean?
"Cap" is short for capitalization;
technically in this context we mean "market capitalization,"
or the market value of a publicly traded
company's outstanding shares.
OK
The average stock price of 30 important companies
OK, I will try again.
The DJIA is based on the stock prices of 30 important corporations.
However, it is not a simple average of their prices.
On July 10,2018, for example, the prices ranged from $37 (Pfizer) to $347 (Boeing),
with the average price of $122.
But the DJIA was 24,895.
That is not even close to the average stock price.
None of the above
OK
Why did you select "none of the above?"
Because none of the choices describe the companies included the DJIA.
Actually, "30 important companies" is an accurate description.
There is a problem with the above descriptions,
but it is not the identity of the companies.
Because the "average" is not calculated
as a normal average.
The average stock price is about $120
but the DJIA is currently (2018) over 24,000.
So it is obviously not a normal average. What is it?
OK
A secret formula that is not public
Some indexes, including the S&P500,
include a secret factor that is not made public.
However, the exact DJIA formula is public.
A price-weighted average
a scaled average
OK
A weighted average
The DJIA is widely called "price weighted" by economists,
including the people who publish the index.
However, this terminology is confusing,
since "weighted average" has a precise mathematical meaning that doesn't apply here.
The DJIA computes a simple average (not weighted) and them multiplies it by a scaling factor.
A better term would be "scaled average."
explain a weighted average
Explain a scaled average
In a simple average, components are added and then divided by the number of components.
For example, 15,20, and 40 average to (15+20+40)/3 = 25.
But suppose the $15 stock is more important than the others.
We can give it more weight in the average, for example (2*15 + 20 + 40)/4 = 22.5.
$15 is counted, or weighted twice. This is NOT what the DJIA does.
The DJIA is a scaled average.
The average stock price is computed and then multiplied by a large scaling factor, currently roughly 200.
Thus a $120 average stock price translates to a 24,000 index value.
I understand what they calculate, but not why
I don't understand, or I don't agree.
TEACHER
The "why" is complicated,
but it has to do with things
that change a stock price artificially, like stock splits.
When a stock splits, the price changes
but we don't want the index to change.
So we change the divisor, the "fudge factor," to compensate.
I understand
I thought the average was divided, not multiplied.
Isn't it called the "Dow divisor?"
OK
I want to know more
A stock "split" means that a company
doubles the number of shares each stockholder has
and cuts the price in half. Each shareholder
and the company as a whole have exactly the same value,
but the price per share is cut in half.
This would cause a sudden drop in the stock index,
for no good reason, so they change the divisor to compensate.
OK
OK
Mathematically, multiplying by 200
or dividing by 0.005 are the same thing. 0.005 is 1/200.
You can do the calculation either way;
I think multiplying is easier to understand.
OK
But the "DOW divisor" is actually 0.15, not 0.005!
DONE
Why would they do that?
OK
Lower prices per share make the stock more attractive to small investors.
A stock split is also a sign to the market that the company expects to continue to grow
Correct, because you also have to divide by 30 to get the average to begin with.
Technically the "Dow divisor" is the number you divide the sum with,
not the number you divide the average with.
So, divide by 30 and then 0.005, or divide by 0.15 in one step,
you get the same answer either way.
Or, multiply by 200, which is also the same answer.
I still want to know more.
OK
OK
You lost me.
Sorry, we are at the limits of this tutorial.
You will have to find some other resource to learn more.
This is too much for an automatic tutor.
You need to find a mathematician or an economist to discuss it with you.