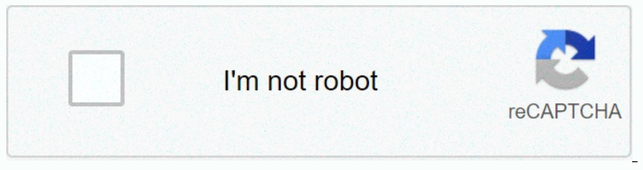

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Solving polynomial equations by factoring

The laws of supply and demand were probably among the first things taught in Economics 101. You may have taught them how to sell candy and gift wrap for your child's school or sports team. Simply put, the laws of supply and demand reflect the relationship between how much of something a producer or manufacturer wants to sell at a price, what the price should be and how many consumers are willing to buy at that price. The price being set is called the equilibrium. This is where the producer who makes the product, and the consumer, who buys the product to satisfy a need or wants, find the sweet spot. When the producer and the consumer arrive at the magic number, it's the result of an equation that isn't as complex as it seems on the surface. We take the figure quantity demand, which we will call Qd. Then we take the quantity supply figure, which we will call Qs. To get to the sweet spot, keep in mind that quantity that is in demand must equal quantity be delivered. This calculation assumes that there are no external influences that can affect the price. In other words, the item has not become a fad, or, there is no kind of external baggage that would cause consumers to reject it. Now it's time to figure out the quantity you need, based on supply and demand. Plot the demand and supply numbers you use on the demand and supply curves. Think of price as the vertical and quantity as the horizontal. So here's an example: D(demand) = 20 - 2P(price). So you take that demand figure of 20, and subtract from the two multiplied by the price. S(delivery) = -10 + 2P(price). So the supply corresponds to minus 10 multiplied by two multiplied by the price. Here's where the equation works: D = 20 - 2P and S = -10 + 2P will be 20 - 2P = -10 + 2P. It simplifies to 20 + 10 = 4P, or 30 divided by 4, which corresponds to price. The price is then 7.5, or $7.50 if we work in single dollars. To find quantity, put 7.5 in one of the equations. Q = 20 - (2 x 7.5). Your quantity is equal to five, which is the sweet spot where the quantity requested is equal to the quantity delivered (Qd equals Qs). When trying to figure out demand, remember that a demand curve usually arcs downward, since most people would rather pay less and get more of the product. Any change in factors that do not imply price would cause a change in the demand curve. Changes in price can be tracked along a fixed demand curve. Next, you want to figure out your delivery curve. The ideal number of products on the market depends not only on the price but similar products outsourced by your competitors, technology, labor and production costs. You want to consider different prices, and the quantity offered at any price while maintaining other factors constant. Now you have your supply curve. The equilibrium price is where demand and supply meet. If buyers want more of what you sell at the current price, you can probably your price. If they don't buy most of what you produce, then your suppliers will want you to lower the price. After discussing your individual concerns about osteoporosis with your healthcare professional, a range of laboratory tests may be recommended. These tests will help identify or exclude conditions other than menopause that can cause low bone density. These tests include: complete blood body number of chemistry studies If medical history or physical findings suggest secondary causes (causes other than menopause and age) of bone loss, then further laboratory tests may be provided. Ad A bone mineral density test (BMD) is the only way to detect low bone mass. This screening test: measuring bone strength predicts if your bones are at risk of fracture may monitor the effects of treatment if the test is performed at a year's interval or merpredicter your future risk of osteoporosis painless and noninvasive Simple and painless measurements are usually taken by the bones of the hip, wrist and spine — the most common sites of fractures due to osteoporosis. Some other tests measure bone density in the middle finger, heel, shinbone or total body. A very small amount of radiation can be used, and you usually remain dressed during the procedure. No dyes are injected. The U.S. Preventive Services Task Force recommends that women aged 65 and older be routinely screened for osteoporosis and that routine screening begin at age 60 for those women identified at high risk for the condition. There are several types of BMD tests. They fall into two categories: Central machines measure bone density in the hip, spine and total body, while peripheral machines measure density in the finger, wrist, kneecap, shin bone and heel. It is smart to have your test performed at a facility, such as a hospital or special osteoporosis center, which does bone density testing regularly. Talk to your healthcare professional about the best test for you: DXA (Dual Energy X-ray Absorptiometry) measures bone density at the spine, hip or total bodySXA (Single Energy X-ray Absorptiometry) measures the wrist or heelpDXA (Peripheral Dual Energy X-ray Absorptiometry) measures the wrist, heel or fingerRA (Radiographic Absorptiometry) measuring the hand and wristQCT (Quantitative Computed Tomography) measuring the wrist or spineUltrasound uses sound waves to measure the heel, shin legs and kneecap I love the line fictitious president , Jeb Bartlet, used on stress on the TV series The West Wing; Stress is something they invented to sell flavored coffee. As a former multi-tasker, I'll admit I laugh a little at people who get nervous on every little thing. As a person living with multiple sclerosis, I find myself slipping on these shoes on more occasions than I prefer to admit. Many of you have commented on stress as a for exacerbations. There was a time when people with MS were told to avoid all stressful situations, as it would make our symptoms worse. Five years ago around the time I was diagnosed, the revelation was that stress had nothing to do with the disease. I don't know about you, but I think the truth is somewhere in the middle of that pendulum swing. Although stress may not be a causative factor in the disease (as previously thought), I have to believe that there is something of a connection. Let us face it; MS is a disease by which any part of our immune system is faulty. Few doctors wouldn't agree that stress (and I guess each of us has a different tolerance for this feeling) has an effect on the immune system. How many of us have gotten sick on holiday due to the fact that we stressed ourselves out to get everything ready to be gone for these two weeks? Stress has different effects on different people. For us with MS, stress can have an effect on our disease. That's my opinion, and I'll stick to it. Do you feel that stress affects your MS? Have you found yourself in a worse place - MS-wise - after a particularly stressful time? Has relieving stress from your life made your illness better? We all wait pensively for your answers. This is killing me. Wish you and your family the best of health. Cheers, Trevis Would you like to have a free CAS and graphing program on your computer? Here's a free add-on from Microsoft that will make Word and OneNote first-class math programs. Microsoft's new add-on to math for Word 2007 and 2010 is a great tool for working with math in Office. It allows you to create beautiful graphs and solve equations without buying an expensive math program. Get started by downloading Microsoft's math add-ons (link below), and install as usual. Make sure you've left Word and OneNote before you begin the installation. The Math add-on generates beautiful 3D graphs powered by DirectX, so you are prompted to install the latest version of DirectX at the end of the installation. The next time you open Word 2010 or 2007, you'll notice a new math tab on the ribbon. Here you can insert equations, graphs, and more directly into your Word documents. OneNote 2010 will have a similar Math tab, but OneNote 2007 won't because it doesn't have the ribbon. OneNote works especially well for use with math because it uses a more free style editing form. OneNote contains a very interesting feature: you can insert equations with digital ink. While editing a new equation, click Ink Equation to start typing the equation in on your touchscreen. This will open a new window where you can print your equation on your touchscreen or Wacom tablet. You can also write equations out with your mouse, in general, it would be very much to enter them! Note that the app automatically displays its interpretation of the written equation above. If it seems like it's getting it wrong, keep writing; it often comes autocorrect as you exit your equation. Alternatively, you can insert a set of prebuilt equations by clicking the down arrow below the Equation button in any of the programs. More equations are available Office.com to add to your gallery. Word gives you access to a wide variety of equation editing tools that are built-in. OneNote includes similar tools, but they're slightly less full-ended. Once you have received an equation set you want to see, click the Graph button. Depending on the equation, you can draw the graph in 2D or 3D. This will open the Graph addin where you can choose zoom level, wireframe, animation, and more. This produces very fine complex graphs. Click Insert to add the graph to your document. You can even use the Math addin to solve, integrate, or differentiate your equations. Here we made a distinction, then integrated it back. This is a simple example, but the Math plugin can handle much more difficult equations with no problems. This can be a great study aid for students, and is almost like a basic free Mathematica! Here is another equation where we solved for x. Works pretty well. The Math Add-in can handle quite complex equations, but when we tried to solve Binominal Theorem for x, we got an error message. Still, we were surprised at how much this addon could do! No matter what level of math you are currently taking, the Math Add-in is a great tool that will help you bring your math skills with software you already have. No need to buy expensive graphing software; this simple addin from Microsoft can make Office a nice CAS and graphs suite! If you want to make Word a great tool for more educational and research work, check out the chemistry add-ons for Word too! Download the Word and OneNote OneNote math add-in