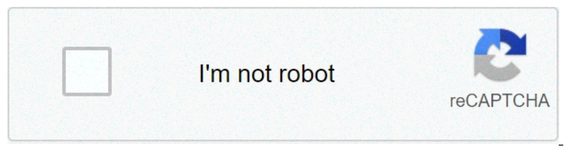

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Secondary math 2 module 3 solving quadratics and other equations answers

No, I’m not here on behalf of the evil Big Pizza lobby. According to simple math, if you’re buying multiple small pizzas instead of getting a bigger one, you’re almost always wasting money. This video breaks it down.As the video above from ASAP Science breaks down with handy visuals, the amount of extra pizza you get when you go up a size is almost always disproportionate to its price. For example, an 8" pizza has around 50 square inches of pizza content (disregarding the ratio of pizza to crust, which is an important culinary factor). However, a 16" pizza isn’t double the amount of pizza, like we might instinctively think. It’s actually four times as much, with 200 square inches of pizza. Yet you almost never find a pizza place where a small 8" pizza is four times cheaper than a large 16" pizza.In general, the more pizza we have the better. This is especially true for a Super Bowl Party, so…Read moreWe’ve touched on this concept before, but the visuals above help drive it home. You can also calculate your own pizza areas with a simple equation that you probably learned in middle school and have forgotten by now.A=πr2In other words, the area of a pizza is equal to the radius squared, times pi. Just plug in half of whatever size is listed on the menu into this equation and you’ll get your area. Then you can compare the price per unit to get the best deal. In almost all cases, you’ll find that the larger pizzas are better, but hey, it can’t hurt to double check the deal, right?The Pizza Equation | ASAP Science Image: OJO Images/ OJO Images/Gettty Images Math is one of the first things that many people learn in school as kids. It is also something that many people struggle with throughout their lives. While math can get as complex as geometry, calculus and physics, it all starts with simple addition and subtraction. These are the initial things people learn in school that all other math is built on. If you can't take on simple addition, multiplication, subtraction, and addition problems, you will never be able to get the hard stuff right. For some people, this simple math is easy, even if they struggle with the later and more complex areas of mathematics, such as graphing and working with shapes. For others, all math is a headache, from the shortest subtraction problem to the most involved parabola. They say that left-brained people excel in logic, analysis, and mathematics. Are you a left-brained number whiz who can blow through elementary math with no problem at all? Or are you a right-brained person who would rather paint a picture than whip out a graphic calculator? If math problems are never a problem for you, put your number crunching skills to the test with this numerical elementary school math problem quiz. TRIVIA Can You Solve These Basic Word Problems from Elementary School? 7 Minute Quiz 7 Min TRIVIA The Mental Math Quiz 5 Minute Quiz 5 Min TRIVIA Can You Ace This Math Vocabulary Quiz? 6 Minute Quiz 6 Min TRIVIA HARD Only a Genius Can Solve These Simple Math Problems in Less Than Eight Minutes. Can You? 6 Minute Quiz 6 Min TRIVIA Can You Get a Perfect Score on This Basic Shapes Quiz? 6 Minute Quiz 6 Min TRIVIA Can You Solve These Mental Math Problems? 5 Minute Quiz 5 Min TRIVIA Can You Solve These Logic Problems? 7 Minute Quiz 7 Min TRIVIA Test Your Math Knowledge With This Quiz! 5 Minute Quiz 5 Min PERSONALITY Could You Cut It as an Elementary School Teacher? 5 Minute Quiz 5 Min TRIVIA If We Give You Two Fractions, Can You Tell Us Their Sum? 6 Minute Quiz 6 Min How much do you know about dinosaurs? What is an octane rating? And how do you use a proper noun? Lucky for you, HowStuffWorks Play is here to help. Our award-winning website offers reliable, easy-to-understand explanations about how the world works. From fun quizzes that bring joy to your day, to compelling photography and fascinating lists, HowStuffWorks Play offers something for everyone. Sometimes we explain how stuff works, other times, we ask you, but we’re always exploring in the name of fun! Because learning is fun, so stick with us! Playing quizzes is free! We send trivia questions and personality tests every week to your inbox. By clicking "Sign Up" you are agreeing to our privacy policy and confirming that you are 13 years old or over. Copyright © 2021 InfoSpace Holdings, LLC, a System1 Company Imagine it’s 8th-grade homeroom: the bell rings, and you take your seat. Written on the board is the following:X + Y + Z = $The teacher walks in and announces that solving this equation is your assignment. Teen angst–even more than usual–ensues. That’s because this equation can’t be solved. Why? Because there’s no constant.The above equation is one that marketers encounter each day. But instead of cardigan clad teachers, these professionals answer to hardened CMOs and investors who aren’t in a position to gently walk them through it. Brands need to grow, and this equation must be solved–now!There are three factors–X, Y, and Z–to account for in order to drive brand innovation. They aren’t easy to obtain, but they certainly are simple. And it all starts with assigning a constant.To form a true strategic platform, one must have X–an audience or target, Y–a felt need or desired benefit, and Z–design DNA or capability.Often, larger organizations are bereft of all three of these, so much so that it can cause paralysis of choice. Startups, on the other hand, often only have one constant to which they cling.Whether it’s an engineer applying physics to make a new heart valve (Z), a coder writing an algorithm for a new diet app (Y), or a mom-preneur looking to social media as a way for moms to meet other moms (X), their constant is the key to solving for the other two variables.Big brands should identify the constant they know the most about, then work to develop the other two variables in order to create meaty platforms. It’s one of the true keys to making efficient progress, and to quickly pressure-testing for failure points before getting too far down the road. Here’s a look at how to break down the process to find your constant:X–Is the AUDIENCE your constant?Do you know your audience? Can you describe them like you would a friend? Can you explain their tastes, fears, likes, dislikes, and characteristics?Or, do you at least know about them? Can you explain how old they are, where they shop, in which type of community they reside?For example, if you know them, you may be working from a fresh segmentation study that really puts a face on a given consumer group. If you know about them, you may be interested in growing your brand’s market share with Millennials. Either is a suitable constant from which to work.Y–Is the FELT NEED your constant?This territory becomes a bit more nuanced, but the simple summary of it falls within the following two questions: What does the marketplace need? What is scarce? If you’ve identified a felt need and have a pretty good answer to those questions, you’ve probably found your constant here.For example, it’s easy to observe that people need energy. It’s also easy to observe that energy drinks are not scarce. So, you may observe that people need energy in a way that won’t leave them feeling jittery. Alright, now you probably have a constant from which to work. You can now set about identifying who most needs this, and how you’ll uniquely deliver it.Z–Is Design DNA your constant?A great example of this is when the R&D team shows up with a new, patent-pending technology. Now you have the Design DNA–the capability–as your constant, and your job becomes determining who needs it, and which felt needs it solves.Any of these three are viable constants and a surefire way to lead your teams beyond the churn that often comes with big brand innovation. Simply identifying your constant will not only ensure you create substantive innovation platforms, but that you lead your team towards growth with the best, most competitive foot forward.The principle in real lifeThe Innovation Equation comes to life in a new brand example like Chobani and its founder Hamdi Ulukaya.As Ulukaya tells it, he was running a struggling cheese brand when he literally pulled a direct mail piece advertising a tired old yogurt factory from his trash can and decided to take a look on a whim. Ulukaya’s constant fell in his lap (or, more accurately, his trash can).He had the Design DNA (Z) that would ultimately enable his breakthrough: the dormant yogurt plant. He spent two more years after that fateful factory tour figuring out whom he would serve (X), and why his new product had a right to exist (Y). The Innovation Equation that drove Greek yogurt from less than 1% of the category to nearly 60%, and continues to drive double-digit year-over-year growth, was born.These principles are drawn from Hunter Thurman’s new book, Brand Be Nimble: How Big Brands Can Thrive by Innovating Like Startups. As founder of the innovation lab Thriveplan, the book is a result of Thurman’s global experience across every consumer packaged goods category, complemented by his work as an innovation mentor to Cincinnati’s startup accelerator, The Brandery. Morrowind/ShutterstockCalling all number nerds: Put away your calculators! We have a problem that is sure to put your mathematical minds to the test. Do you think you have what it takes?First, here is the equation: 9 – 3 ÷ 1/3 + 1 = ?That’s it! Before you start, though, we should leave you with a brief warning. This equation may seem simple at first, but it’s way harder than it looks. In fact, only about 60 percent of the engineers got the correct answer on the first try, according to a Japanese study.If your first instinct was to solve the problem from left to right, your guess is probably 3. But don’t forget to use the PEMDAS rule—“Please Excuse My Dear Aunt Sally,” or “Parenthesis, Exponents, Multiplication, Division, Addition, Subtraction”—which gives the order in which to calculate each set of numbers.The fraction adds another hurdle to this problem, too. Suddenly, what was once a simple equation now looks like a numerical nightmare. (The Internet can’t solve this third-grade math problem, either.)Need a hint? TipHero suggests dividing 3 ÷ 1/3 first. Remember that dividing fractions actually requires you to multiply, so you should get 9 as the answer. Adding that to the rest of the equation, you’re left with 9 – 9 + 1.Now, the PEMDAS rules call for you to solve all addition and subtraction problems in the order they appear. So instead of adding first, you will solve the equation from left to right.If your final answer is 1, congrats! You are correct. But for those who are still stumped, you’re not alone. You can watch this entire video to see how they calculated the solution.Whether or not you solved the equation on the first try, there is certainly more where that came from. Test your knowledge with this elementary school math test–study up with these tips for bettering your mental math! [Source: TipHero] 1 The Best Dog Breeds for Older Adults 2 Why Is Literature Important and Why Do We Study It? 3 Barometric Pressure Explained 4 The Most Destructive Hurricanes of All Time 5 Automobiles: What Are Some Cars That Start With the Letter "W"? 1 Difficult Predictions: Is AccuWeather's 30-day Forecast Accurate Anymore? 2 The History of Independence Day in the U.S. 3 What Is a Legend on a Map? 4 Milkweed and Monarch: How to See More Butterflies This Summer 5 What Is the Capital City of Hong Kong? Exponential functions tell the stories of explosive change. The two types of exponential functions are exponential growth and exponential decay. Four variables — percent change, time, the amount at the beginning of the time period, and the amount at the end of the time period — play roles in exponential functions. This article focuses on how to use word problems to find the amount at the beginning of the time period, a. Exponential growth: the change that occurs when an original amount is increased by a consistent rate over a period of time Uses of Exponential Growth in Real Life: Values of home prices Values of investments Increased membership of a popular social networking site Here’s an exponential growth function: y = a(1 + b)x y: Final amount remaining over a period of time a: The original amount x: Time The growth factor is (1 + b). The variable, b, is percent change in decimal form. If you are reading this article, then you are probably ambitious. Six years from now, perhaps you want to pursue an undergraduate degree at Dream University. With a $120,000 price tag, Dream University evokes financial night terrors. After sleepless nights, you, Mom, and Dad meet with a financial planner. Your parents’ bloodshot eyes clear up when the planner reveals an investment with an 8% growth rate that can help your family reach the $120,000 target. Study hard. If you and your parents invest $75,620.36 today, then Dream University will become your reality. This function describes the exponential growth of the investment: 120,000 = a(1 +.08) 6 120,000: Final amount remaining after 6 years .08: Yearly growth rate 6: The number of years for the investment to grow a: The initial amount that your family invested Hint: Thanks to the symmetric property of equality, 120,000 = a(1 +.08)6 is the same as a(1 +.08)6 = 120,000. (Symmetric property of equality: If 10 + 5 = 15, then 15 = 10 +5.) If you prefer to rewrite the equation with the constant, 120,000, on the right of the equation, then do so. a(1 +.08) 6 = 120,000 Granted, the equation doesn’t look like a linear equation (6a = $120,000), but it’s solvable. Stick with it! a(1 +.08) 6 = 120,000 Be careful: Do not solve this exponential equation by dividing 120,000 by 6. It’s a tempting math no-no. 1. Use Order of Operations to simplify. a(1 +.08) 6 = 120,000 a(1.08) 6 = 120,000 (Parenthesis) a(1.586874323) = 120,000 (Exponent) 2. Solve by Dividing a(1.586874323) = 120,000 a(1.586874323)/(1.586874323) = 120,000/(1.586874323) 1 a = 75,620.35523 a = 75,620.35523 The original amount to invest is approximately $75,620.36. 3. Freeze -you’re not done yet. Use order of operations to check your answer. 120,000 = a(1 +.08)6120,000 = 75,620.35523(1 +.08)6120,000 = 75,620.35523(1.08)6 (Parenthesis)120,000 = 75,620.35523(1.586874323) (Exponent)120,000 = 120,000 (Multiplication) Original Worksheet Farmer and FriendsUse the information about the farmer's social networking site to answer questions 1-5. A farmer started a social networking site, farmerandfriends.org, that shares backyard gardening tips. When farmerandfriends.org enabled members to post photos and videos, the website's membership grew exponentially. Here’s a function that describes that exponential growth. 120,000 = a(1 + .40) 6 How many people belong to farmerandfriends.org 6 months after it enabled photo-sharing and video-sharing? 120,000 peopleCompare this function to the original exponential growth function:120,000 = a(1 + .40)6y = a(1 +b)xThe original amount, y, is 120,000 in this function about social networking. Does this function represent exponential growth or decay? This function represents exponential growth for two reasons. Reason 1: The information paragraph reveals that "the website membership grew exponentially." Reason 2: A positive sign is right before b, the monthly percentage change. What is the monthly percent increase or decrease? The monthly percent increase is 40%, .40 written as a percent. How many members belonged to farmerandfriends.org 6 months ago, right before photo-sharing and video-sharing were introduced? About 15,937 membersUse Order of Operations to simplify.120,000 = a(1.40)6120,000 = a(7.529536)Divide to solve.120,000/7.529536 = a(7.529536)/7.52953615,937.23704 = 1a15,937.23704 = aUse Order of Operations to check your answer.120,000 = 15,937.23704(1 + .40)6120,000 = 15,937.23704(1.40)6120,000 = 15,937.23704(7.529536)120,000 = 120,000 If these trends continue, how many members will belong to the website 12 months after the introduction of photo-sharing and video-sharing? About 903,544 membersPlug in what you know about the function. Remember, this time you have a, the original amount. You are solving for y, the amount remaining at the end of a time period.y = a(1 + .40)xy = 15,937.23704(1+.40)12Use Order of Operations to find y.y = 15,937.23704(1.40)12y = 15,937.23704(56.69391238)y = 903,544.3203