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Author: Calculator Academy Team Last Updated: October 5, 2023

Enter the effectiveness, persuasiveness, and memorability into the calculator to determine the impact score. The following formula is used to calculate the Rule of 3 impact score. Variables: IS is the impact score E is the effectiveness of the element (rated from 1-10) P is the persuasiveness of the element (rated from 1-10) R is the memorability of the element (rated from 1-10) To calculate the Rule of 3 impact score, multiply the effectiveness of the element by its persuasiveness and memorability. Then, divide the result by 3. This will give you an impact score that reflects how well the element adheres to the Rule of 3, with higher scores indicating a more satisfying, effective, and memorable element. The Rule of 3 is a principle often used in writing that suggests things that come in threes are inherently more satisfying, effective, or memorable to readers. It's based on the idea that people process information through pattern recognition, and three is the smallest number of elements required to create a pattern. This concept is widely used in storytelling, speeches, and advertising for its persuasive and impactful effect. The following steps outline how to calculate the Rule of 3 using the given formula: First, determine the effectiveness of the element (E) on a scale of 1-10. Next, determine the persuasiveness of the element (P) on a scale of 1-10. Multiply the memorability of the element (R) on a scale of 1-10. Multiply the effectiveness (E), persuasiveness (P), and memorability (R) together. Finally, divide the result by 3 to calculate the impact score (IS). Example Problem: Use the following variables as an example problem to test your knowledge. Effectiveness (E) = 8 Persuasiveness (P) = 6 Memorability (R) = 9 In today's post, we are going to work on proportions. This time we will look at a way of solving direct and inverse proportions: the rule of 3. What is the rule of 3? The rule of 3 is an operation that helps us quickly solve both direct and inverse proportion word problems. In order to use the rule of 3, we need three values: two that are proportional to one another and a third. From there, we will figure out the fourth value. Direct rule of 3 We will begin by looking at how to apply it in the case of direct proportions. We will place the 3 values (which we will call "a", "b", and "c") and the unknown value that we want to figure out ("x") in a table. Next, we will apply the following formula. We are going to solve the following problem as an example: Upon arriving at the hotel, the staff gave us a map displaying the places of interest in the city and told us that 5 centimeters on the map represented 600 meters in reality. Today we want to go to a park that is located 8 centimeters from the hotel on the map. How far from the hotel is the park? Let's make a table with the 3 values and the unknown value ("x"), and we will find "x" with the formula that we have just learned. Centimeters on the map Meters in reality Answer: The park is located 960 meters from the hotel. Inverse Rule of 3 Now we will look at how to apply the rule of 3 in the case of inverse proportions. We will place the 3 values and the unknown value in the table, just as we did in the previous case, but we will apply a different formula: Let's look at an example: Yesterday, 2 trucks transported goods from the port to the warehouse. Today, 3 trucks, the same size as yesterday, will have to make 6 trips to transport the same amount of goods from the warehouse to the mall. How many trips did the trucks make yesterday? We place the values in a table and apply the formula for the inverse rule of 3: Trucks Trips Necessary Answer: Yesterday, 2 trucks made 9 trips. What did you think of this post? Isn't it easy to apply the rule of 3 to proportion word problems! You can learn more about direct and inverse proportion with this previous post on our blog: Rule of Three Problems. Remember that you will be able to practice exercises, proportion word problems and much more with Smartick! Try it for free! Learn More: Direct and Inverse Proportionality Problems Direct and Inverse Rule of 3 Problems Inverse Proportionality: The Rule of Three Inverse Problems Involving the Inverse Rule of 3 Compound Rule of 3: When to Use It and Some Problems Fun is our brain's favorite way of learning!Diane AckermanSmartick is a fun way to learn math!5 fun minutes a dayAdapts to your child's levelMillions of students since 2009Start your 7-day free trial The Rule of Three is a Mathematical Rule that allows you to solve problems based on proportions. By having three numbers: a, b, c, such that, (a / b = c / x), (i.e., a : b :: c : x) you can calculate the unknown number. The Rule of Three Calculator uses the Rule of Three method to calculate the unknown value immediately based on the proportion between two numbers and the third number. The working of the Rule of Three Calculator can be expressed as follows: Here, there are two values: A and B and a value of X. In order to find out the value of Y, the Rule of Three tells me that B is related to A and that Y is related to X. How does the Rule of Three Calculator work? Simply fill in the fields of the Maths Calculator with the values you want to work out (Value A, Value B and Value X), press the calculate button and the Rule of Three Calculator will immediately display the missing value of Y. An example of the Rule of Three: An example that you would use to explain the rule of three is as follows: If I have 8 litres of paint for 2 bedrooms, how many litres of paint would I need for 5 bedrooms? In this case, the two values of A and B are known, A) 2 bedrooms and B) 8 litres. The value of X is also known (5 bedrooms) and the missing value is that of Y (the number of litres) So: A rule of three is a method to find the fourth term of a proportion when three terms are given. There two type of rule of three, direct and inverse. If one magnitude increases, the other one also increases, in the same proportion. a, b, and c are known. To calculate d: Example: It takes 2 hours (a) to travel 200km (b). But, what happens if our travel last 4 hours (c), what is the distance (d)? Note that this is a direct rule of three because if the number of hours increases, the distance also increases. Solution: d = c x b/a = 4 x 200 / 2 = 400 km If one magnitude increases, the other one decreases, in the same proportion. a, b, and c are known. To calculate d: Example: Ten workers (a) are able to finish the job in 2 days (b). If now we have 20 workers (c), how many days (d) will be required? Note that this is an inverse rule of three: if the number of workers increases, the number of days decreases. Solution: d = a x b/c = 10 x 2/20 = 1 day. List of online calculators Put this calculator on your website [was-this-helpful]The Rule of Three is a Mathematical Rule that allows you to solve problems based on proportions. By having three numbers: a, b, c, such that, (a / b = c / x), (i.e., a : b :: c : x) you can calculate the unknown number. The Rule of Three Calculator uses the Rule of Three method to calculate the unknown value immediately based on the proportion between two numbers and the third number.The working of the Rule of Three Calculator can be expressed as follows:Here, there are two values: A and B and a value of X. In order to find out the value of Y, the Rule of Three tells me that B is related to A and that Y is related to X.How does the Rule of Three Calculator work?Simply fill in the fields of the Maths Calculator with the values you want to work out (Value A, Value B and Value X), press the calculate button and the Rule of Three Calculator will immediately display the missing value of Y.An example of the Rule of Three:An example that you would use to explain the rule of three is as follows: If I have 8 litres of paint for 2 bedrooms, how many litres of paint would I need for 5 bedrooms?In this case, the two values of A and B are known, A) 2 bedrooms and B) 8 litres. The value of X is also known (5 bedrooms) and the missing value is that of Y (the number of litres) So: Content The rule of three is a form that allows the resolution of problems of proportionality between three known values and an unknown, in other words, the rule of three is an operation that allows you to find a fourth term with respect to a given proportion. Simple rule of three A simple rule of three is classified in two ways, direct and inverse. Simple direct three rule It is considered to be direct when one magnitude increases so does the other. Below is an example to know the unknown using the rule of three Assuming 4 pallets cost \$ 20. How much do 7 pallets? Note: It is a problem of direct proportion, since the more pallets you acquire the total cost also increases. First we must put in a fraction the known data, corresponding to 4 pallets with a total value of 20 dollars: It can also be accommodated as follows: Now we must match the unknown and the known data that corresponds to 7 palletes, it is important to note that the type of variable is in the same corresponding row, we have variables palletes and the cost that corresponds to pesos. The unknown is usually represented with the letter "x" but can be represented with any letter. 4 pallets / 20 dollars = 7 pallets / X Having the other accommodation with 20 dollars / 4 pallets will have: 20 dollars / 4 pallets = X / 7 pallets In the second arrangement it is easier to clear, any accommodation we have at the time of making the corresponding clearances will reach the same equation to find the unknown. We perform the corresponding clearances: 4 pallets (X) / 20 dollars = 7 pallets X = (7 pallets / 4 pallets) (20 dollars) As you can see the type of magnitude, in this case "pallets" is simplified by having "pallets / pallets", therefore, the result of the unknown would be the dollars: X = (7 / 4) (20 dollars) = 35 dollars Increasing the magnitude from 4 to 7 pallets also increases the magnitude of the cost from 20 to 35 dollars, therefore, it has to be a simple direct rule of three. Pallets Dollars 4 20 7 35 Inverse simple three rule It is considered to be inverse when one magnitude increases and the other decreases. Below is an example to know the unknown using the rule of three Assuming that 2 workpeople finish painting in 10 hours. How long will it take 5 workers? Note: It is a problem of inverse proportion, for logical reasoning more workers less time will take to paint. For this case the simplest way to relate is to multiply the different variables, in this case (workpeople) (hours), therefore, the following equation would be obtained: (2 workpeople)(10 hours) = (5 workpeople)(X) Making the corresponding clearance: X = (2 workpeople / 5 workpeople) (10 hours) = 4 hours As the magnitude increases from 2 to 5 workpeople, the time decreases from 10 to 4 hours of work, therefore, it has to be a rule of three simple inverse. How to know if it is a direct or inverse rule of three? To know what method to use, you have to make a logical reasoning of the problem, by reasoning or imagining the problem, you can easily know the procedure to be used. This article discusses the topic of the rule of three in detail. You will learn the rule of three formula, learn how to solve and calculate rule of three problems, and become familiar with the compound rule of three. The use of the rule of three in percent calculation is also explained and you will receive helpful rule of three exercises. Rule of three explained simply The rule of three is a basic mathematical method for calculating proportional and anti-proportional relationships between two quantities. It is important to understand the difference between proportional and anti-proportional relationships in order to correctly apply the rule of three. With the Rule of three From a given ratio of two quantities, you can calculate the ratio of one quantity to another value of the other quantities. Calculating with the rule of three is also known as the final calculation. Rule of three formula and procedure When calculating with the rule of three, you can follow the following steps. Write down all the values you gave. Calculate the ratio for a unit of the desired size. Calculate the ratio you are looking for by multiplying by the appropriate factor. There is no specific formula for calculating the rule of three, but the procedure is always the same. Go through these steps straight away for the example from the introduction. 1. Write down all the values you gave. You know that 9 nuggets cost \60\text{\text{€}} and you know that you want 6 nuggets. The number 9 of nuggets is proportional to the price \60\text{\text{€}} \). Step Number Price The invoice 1. 9 \60\text{\text{€}} \) 6 2. Calculate the ratio for a unit of the desired size. Now divide the number of nuggets and their price by 9 to find out how much 1 nugget costs. Step Number Price The invoice 1. 9 \60\text{\text{€}} \) :9 2. 1 \0\{.67\}\text{\text{€}} \) 6 3. Calculate the ratio you are looking for by multiplying by the appropriate factor. Now multiply by 6 to find out how much 6 nuggets cost. Step Number Price The invoice 1. 9 \60\text{\text{€}} \) :9 2. 1 \0\{.67\}\text{\text{€}} \) :6 3. 6 \4\{.02\}\text{\text{€}} \) Six nuggets therefore cost \4\{.02\}\text{\text{€}} \). When calculating with the rule of three, the ratio of the two quantities plays a major role and you can distinguish between two different cases: Proportional rule of three Antiproportional rule of three The more You are of one size, the more You also have the other size. The more You are of one size, the less you have the other size The more chocolate you buy, the more you pay. The more people help clean up, the less time it takes. Proportional rule of three In the proportional rule of three, there is a direct connection between the two quantities: if one quantity increases, the other also increases and vice versa. The rule of three formula for the proportional rule of three is: Unknown Size = (Known Size * Second Known Size) / First Known Size To apply the proportional rule of three, you first have to think about which quantities are related to each other. You can then use the formula to calculate the unknown quantity. Antiproportional rule of three In contrast to the proportional rule of three, the antiproportional rule of three has an inverse relationship between the quantities: as one quantity increases, the other decreases. The formula for the antiproportional rule of three is: Unknown Size = (Known Size * First Known Size) / Second Known Size Here, too, you must first determine the relationship between the quantities and then use the formula to calculate the unknown quantity. Calculate the rule of three The rule of three can help you in many subject areas and with various word problems, and you can also use it to solve multi-step tasks. Percentage calculation rule of three The percentage value often has to be calculated using the basic equation of percentage calculation. When calculating with the rule of three, the first variable is the percentage and the second variable is the percentage value. Task 1 You have a pack of noodles containing \500\mathrm{g} and want to cook \300\mathrm{g}. What percentage of the pack is that? Solution The \500\text{g} is the basic value, i.e. \100 \%. The \300\text{g} are the percentage value and you are looking for the corresponding percentage. \begin{align}\text{G}&=\text{P}\cdot\text{p} \quad \% \quad \text{\500}=\text{300}\cdot\text{p} \\\text{p}&=\end{align} Step percentage Percentage The invoice 1. \100\% \500\text{g} \) \300\text{g} \) Divide by \mathrm{500 g} to find what percentage equals \mathrm{1 g} \). Step percentage Percentage The invoice 1. \100\% \500\text{g} \) :500 2. \0\{.2 \%\} \1\text{g} \) \300\text{g} \) Then multiply by 300 to find the percentage of \text{300 g} \) you are looking for. Step percentage Percentage The invoice 1. \100\% \500\text{g} \) :500 2. \0\{.2 \%\} \1\text{g} \) :300 3. \60\% \300\text{g} \) \300\text{g} \) corresponds to \60 \% of the packaging. But other issues in the percentage calculation can also be solved using the rule of three. So sometimes the basic value is sought and you give percentage and percentage. exercise 2 According to a survey, 68% of your classmates have a pet. This corresponds to \306 \) people. How many classmates do you have in total? Solution First, set up the table with all the known information for the rule of three. You are looking for the total number of your classmates. This corresponds to \100\% \). Step Number of classmates The invoice 1. \68\% \306 :68 2. \1\% \4.5 \) Finally, multiply by 100 and now you know how many classmates you have in total. Step percent Number of classmates The invoice 1. \68\% \306 :68 2. \1\% \4.5 :100 3. \100\% \450 So you have a total of 450 classmates. In the compound rule of three, the calculation is continued based on the result of the first rule of three. So you didn't just give one, but several sizes. Task 3 Fresh bread rolls are served every day in your school's cafeteria. The 3 employees lubricate in 30 minutes 90 rolls. Calculate based on the fact that everyone works at the same speed how many rolls two employees in 30 minutes lubricate and how many rolls they have two employees into hours would lubricate. Solution First, write down all the information given. Divide by 3 to find out how many rolls 1 employee butters in 30 minutes. Multiply the result by 2 and you know how many rolls the two can grease in 30 minutes. You can now multiply this result by 4 to get the number of rolls for 120 minutes. Step persons Bread rolls Time The invoice 1. 3 90 30 min :3 2. 1 30 30 min :2 3. 2 60 30 min :4 4. 2 240 120 minutes So two employees grease 240 rolls in two hours. When calculating the compound rule of three, two quantities always change and one remains the same. This is because there are only ever two sizes in relation to each other. Rule of three - tasks to practice Test your knowledge with a few practice tasks. Task 4 Above you have already calculated how many of your classmates have a pet. \43\% of this lot have a cat. How many people is that? Solution Write down all the information you know. Note that the 306 classmates who own a pet now equal the \100 \% \). Divide by 100 to find out how many classmates equal one percent. Then multiply by 43 and you get the desired number. Step Number of classmates The invoice 1. \100\% \306 :100 2. \1 \%\} 3.06 \(\approx \) 3 :43 3. \43 \%\} 131.58 \(\approx \) 132 So around 132 classmates have a cat. Task 5 The data volume of \10\text{GB} \) of your mobile phone contract is enough for you for 20 days. How much data volume did you need so that your data volume was enough for 30 days, i.e. a whole month? Solution Write down the information given. Divide by 20 so you know how many gigabytes you use per day. Multiply by 30 to calculate the number of gigabytes needed over 30 days. Step data volume days The invoice 1. \10 \text{GB} \) 20 :20 2. \0\{.5 \%\text{GB} \) 1 :30 3. \15 \text{GB} \) 30 With the Rule of three From a given ratio of two quantities, you can calculate the ratio of one quantity to another value of the other quantities. The Proceed When calculating with the rule of three it is always the same: Write down all the values you gave. Calculate the ratio for a unit of the desired size. Calculate the ratio you are looking for by multiplying by the appropriate factor. Proportional rule of three: The more You are of one size, the more You also have the other size. Antiproportional rule of three: The more You are of one size, the less you have the other size. Rule of Three Calculator. Find the direct or inverse proportionality between different values. Use a period as a decimal separator. X = Formula used for the calculation: The rule of three, also known as "proportion" or "rule of proportion," is a mathematical method used to solve problems of proportions and relationships between different quantities. There are two types of rule of three: simple and compound. Below, I explain the difference between them: Simple Rule of Three The simple rule of three is used when there are three values and you want to find a fourth value that maintains the same proportion as the previous three. It is divided into two types: direct and inverse. Direct Rule of Three It is used when the two magnitudes vary in a directly proportional manner. That is, if one magnitude increases, the other also increases and vice versa. The direct rule of three is calculated with the following formula: Example of Direct Rule of Three If 5 apples cost 10 euros, how much will 8 apples cost? == Inverse Rule of Three It is used when the two magnitudes vary in an inversely proportional manner. That is, if one magnitude increases, the other decreases and vice versa. The inverse rule of three is calculated with the following formula: Example of Inverse Rule of Three If 5 workers take 10 days to do a job, how long will 8 workers take? == Compound Rule of Three The compound rule of three is used when more than two magnitudes are involved and you want to find a value that maintains the proportion with the others. It can be direct or inverse, depending on how the magnitudes are related. Example of Compound Rule of Three Statement If 5 workers build 3 houses in 10 days, how many days will it take 8 workers to build 6 houses? Identify the magnitudes involved: workers, houses, and days. Establish the proportions so that one magnitude is constant and the others vary proportionally. Solve the compound proportion. Solution First, solve the relationship between the magnitudes: Relationship between workers and days: inversely proportional (more workers, fewer days). Relationship between houses and days: directly proportional (more houses, more days). Then, calculate the days it would take 8 workers to build 3 houses using the inverse rule of three: == Since we now know that 8 workers take 6.25 days to build 3 houses, using the direct rule of three we find the days for 6 houses: == Y = = 12.5 days Therefore, 8 workers will need 12.5 days to build 6 houses. The so-called rule of three is an educational tool utilized historically to verbalize the process of solving basic linear equations with four terms where three of the terms are known. Evidence suggests that there are two "different" rules of three: One direct and one inverse. The direct rule of three describes the process for finding the fourth term of a proportion given that , , and are known. In words, the solution is to "multiply the second and third numbers together, and divide product by the first" so that the term in equation (1) above becomes The inverse rule of three describes the process of solving for when and , , and are known. In words, one solves the problem by "multiplying the first and second terms together, and dividing the product by the third" so that