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SPEAKERS

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Let's do another word problem here. We've got a theoretical company called Rogers and they're offering two subscription service plans, Plan A and B. Read the question yourself, and try and answer yourself. When you're ready, play the video forward, and we'll solve the answer together.

Now, we want to solve the number of subscriptions. So looking at the question, we know that subscription A has a profit of 600, and B has a profit of 400. And the total profit earned is \$540,000. So we could use that information to write our first equation in our system of equations. And we're going to have $600A + 400B$ is equal to 540,000. That's our first equation. What about our second equation? Well, if we look at this sentence right here, we can see that there's always 50% more B subscriptions than A subscriptions.

So how can we write that? Well, one way to write it is to say, if I want to know what B is, I just take A and increase it by 50%. So if we want to increase A by 50%, we could write $1.5A$, like so. So we're not going to put the plus 50% on the B, one plus point five on the B, we're going to put it on the A. And that's going to mean if we know what the A is, we know that the B is going to be 50% larger. Now we have everything we need to answer the question. So we can sub in for B right here, you get $600A + 400, 1.5A$, is equal to 540,000. So we have $600A + 400 + 50\%$. That's $600A$ is equal to 540,000. Now we have $1200A$ is equal to \$540,000. And then that takes us down to A is equal to 540,000 divided by 1200. And that gives us 450 subscriptions, so there were 450A subscriptions. Now that we've got A we can go ahead and solve for B. So we know that B is just equal to $1.5A$ and therefore B is going to be equal to 1.5 times 450, which is equal to 675. So there are 675 B subscriptions.

Congratulations on completing this module, looking at systems of equations. I hope you found it increased your confidence solving these equations, applying the rules of algebra, and I hope it increased your confidence when it comes to answering word problems. There's there's a, there's a technique and a style to answering word problems that you can get the hang of if you practice them a little bit. And also if you take the time to write them out as a system of equations, which they usually are. So I'll say goodbye for now, and I look forward to seeing you in the next video.

