So we saw in the previous video how we can solve linear optimization problems in LibreOffice.

Let's now try to get some intuition for what's going on by visualizing our problem.

Since we only have two decisions, R and D, we can visualize our constraints in two dimensions.

We'll plot D on the x-axis, and R on the y-axis.

We first have non-negativity constraints, so R and D are both greater than zero.

We can plot the capacity constraint, R + D less than or equal to 166, which is shown as the red line here.

Our solution has to be to the left of this line according to this constraint.

Now, let's add in our demand constraints.

The regular seats should be less than the demand of 100, which requires the solution to be below this blue line.

And the discount seats should be less than the demand of 150, which requires the solution to be to the left of this green line.

Taken together, our constraints define what we call our "feasible space" or the space of all possible values that our decisions can take according to our constraints.

To find the optimal solution now in our feasible space, we have to use the objective, 617*R + 238*D.

We can plot this objective in our feasible space.

So to know how many seats we should sell to achieve a certain revenue, we can see different values of this line.

So to achieve a revenue of $20,000, our solution has to be somewhere on this line in our feasible space.

To achieve a revenue of $40,000, our solution has to be somewhere on this line in our feasible space.

And to achieve a revenue of $60,000, our solution has to be somewhere on this line in our feasible space.

Since the revenue is increasing as we move this line up and our goal is to maximize the revenue, our optimal solution will be where this line can't go any further and still be in our feasible space.

So our optimal solution is at this point with a revenue of $77,408.

As we can see here, the solution is dependent on how the feasible space was defined.

In the next video, we'll see what happens if our capacity and demands change.