

Episode 1.2

The teacher models how to solve simultaneous linear inequalities.

1. T: Systems of linear inequalities. So just like we had the equations, right, when we graphed lines, we also graphed inequalities where we shaded a region. With the systems we're going to end up shading a couple of regions and see where those regions overlap. OK, so let's take a look at a couple of examples. So I want to graph $x \geq 2$, and I also want to graph $y < -1$. I want to see where those two intersect and that's going to be my solution. So if I look at $x \geq 2$, first I have to graph $x = 2$. Then I need to look at the region where the x values are greater than 2. OK and again I'm going to have a solid line because of the, I need to include the points that are on the line. Next I'll look at $y < -1$, dashed line because the points on the line are not included, and I want to shade the region where my y values are less than negative one. So where do these overlap?
2. S: The green.
3. T: The green, right. The green part. OK, so this is my solution, right... so when we start working these problems I need you to be able to identify this region... I need you to understand that this is the solution, right? Points up here do not satisfy both inequalities. Points here do not satisfy both inequalities. So you'll need to show me this region.