

00:00:05.740 --> 00:00:07.380  
OK, this video is about

00:00:07.380 --> 00:00:08.692  
expanding products and products.

00:00:08.700 --> 00:00:11.661  
I mean stuff like this like  $X + 2$

00:00:11.661 --> 00:00:14.690  
 $* X + 5$  and we're going to use this

00:00:14.690 --> 00:00:17.034  
geometric model and in this model we're

00:00:17.034 --> 00:00:19.890  
going to think of this as being linked.

00:00:22.000 --> 00:00:23.267  
And this is going to be width.

00:00:26.790 --> 00:00:28.104  
And so we're just going to

00:00:28.104 --> 00:00:29.540  
draw here like a rectangle,

00:00:29.540 --> 00:00:31.808  
just sort of a generic rectangle.

00:00:31.810 --> 00:00:34.270  
And cut it like that.

00:00:34.270 --> 00:00:35.686  
And I want this to be the link,

00:00:35.690 --> 00:00:37.130  
so I'm going to call this

00:00:37.130 --> 00:00:38.090  
little dimension here  $X$ .

00:00:38.090 --> 00:00:40.346  
And this little dimension here will be two.

00:00:40.350 --> 00:00:42.060  
So the total length across the

00:00:42.060 --> 00:00:44.879  
top is  $X + 2$  and then up and down.

00:00:44.880 --> 00:00:47.427  
Put an  $X$  here and then a five here.

00:00:47.430 --> 00:00:49.366  
So total up and down dimension is 5

00:00:49.366 --> 00:00:51.445  
and then the complete area of this

00:00:51.445 --> 00:00:53.370  
rectangle is just length times width.

00:00:53.370 --> 00:00:57.012  
So that's going to be  $X + 2 * X + 5$ .

00:00:57.012 --> 00:00:59.196  
The very thing that we want.

00:00:59.200 --> 00:01:01.336  
But also that area is just the sum

00:01:01.336 --> 00:01:03.360  
of these four little areas here,

00:01:03.360 --> 00:01:06.708  
so this error is  $X * X$ . It's  $X^2$ .

00:01:06.708 --> 00:01:09.606  
This one is  $2 * X$  two  $X$ .

00:01:09.606 --> 00:01:14.275  
This is  $5 * X$ . And this one is  $5 * 2$ .

00:01:14.275 --> 00:01:18.205  
So this area here must be.

00:01:18.210 --> 00:01:20.900  
 $X$  squared  $2X$  and  $5X$ .

00:01:24.880 --> 00:01:26.555  
And that's it. That's expanding

00:01:26.555 --> 00:01:27.225  
products geometrically.