00:00:05.880 --> 00:00:07.250
Alright, this video is about

00:00:07.250 --> 00:00:08.346
factoring polynomials that have

00:00:08.346 --> 00:00:10.044
an X squared, so not like a

00:00:10.044 --> 00:00:12.040
three X squared or A5 X squared,

00:00:12.040 --> 00:00:13.671
but just X squared and we're going

00:00:13.671 --> 00:00:15.259
to just do it analytically.

00:00:15.260 --> 00:00:16.061
So, for example,

00:00:16.061 --> 00:00:17.663
we might have something like this.

00:00:20.410 --> 00:00:21.810
And in that area model,

00:00:21.810 --> 00:00:24.034
what we found is we need numbers that

00:00:24.034 --> 00:00:26.038
multiply to negative 8 and add to

00:00:26.038 --> 00:00:28.302
positive two and what we're going to do

00:00:28.302 --> 00:00:30.206
is we're going to put those numbers.

00:00:32.330 --> 00:00:33.326
In these parents here.

00:00:33.326 --> 00:00:34.820
So let me think about things

00:00:34.874 --> 00:00:36.439
that multiply to negative eight.

00:00:36.440 --> 00:00:38.902
We can have, like you know, eight and one,

00:00:38.902 --> 00:00:40.820
and one of those numbers is negative.

00:00:40.820 --> 00:00:42.612
Or we can have four and two and

00:00:42.612 --> 00:00:44.660
one of those numbers is negative.

00:00:44.660 --> 00:00:46.030
And then that's it, right?

00:00:46.030 --> 00:00:48.078
So I could write two and four or

00:00:48.078 --> 00:00:50.708
one and eight, but this is it.

00:00:50.708 --> 00:00:53.210
So I'm gonna put here X.

00:00:53.210 --> 00:00:55.594
And OK, I want I want one pair

00:00:55.594 --> 00:00:58.113
here where one of the numbers is

00:00:58.113 --> 00:00:59.963
positive and one is negative.

00:00:59.970 --> 00:01:03.350
And when I add them I can get in two.

00:01:03.350 --> 00:01:08.060
So I want this one down here and I want X.

00:01:08.060 --> 00:01:11.597
Plus four and minus two because 4 + 2.

00:01:11.600 --> 00:01:15.530
Sorry, 4 - 2 is two and four times negative,

00:01:15.530 --> 00:01:16.682
two negative 8.

00:01:16.682 --> 00:01:19.370
So this worked out and and we've

00:01:19.455 --> 00:01:21.295
written this sum of things

00:01:21.295 --> 00:01:23.780
as a product of two things,

00:01:23.780 --> 00:01:26.138
so that's factoring with X squared,

00:01:26.140 --> 00:01:26.920
just analytically.