Marketing Analytics
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Lecture 26
Pricing (Contd.)

Hello everybody, welcome to marketing analytics course, this Doctor Swagato Chatterjee from VGSOM, IIT kharagpur just taking this course for you, we are still in a week 5 and we are discussing about pricing. So, in this particular session it will still be a small session while we will discuss about markdown pricing and dynamic pricing.

Markdown pricing is basically, where you decide at the certain period of time you will give lower price and you find out that on those period of time there are people who are more price sensitive, will come and there are certain other period of time when people who are not so much price sensitive will come, for example, let say for a particular time period in a particular week in a month or particular day in a week a certain retail companies give certain kind of discounts.

For example, Big Bazaar has Wednesday offs. So, that is one in one I would say example of sails where they are actually trying to say that okay, those who are price sensitive and those I will try to attract them at a certain day and those who are not so much price sensitive, we will try to attract in a some other day.

For example, it can be assume that people who are working and people who are very busy on week days might be less price sensitive. So, I will attract them in the certain other day and then some other days by we will attract people who are not working or less price sensitive, look for opportunities and etc.

There can be monthly variations as well for example in a certain month which is let say before Pooja before Diwali Pooja holydays or festive season or after festive season people who buy before festive season are generally I would say price less concerns people who are buying after Diwali seasons, might it will be price concerns and etc. So, depending on situations I will do that.

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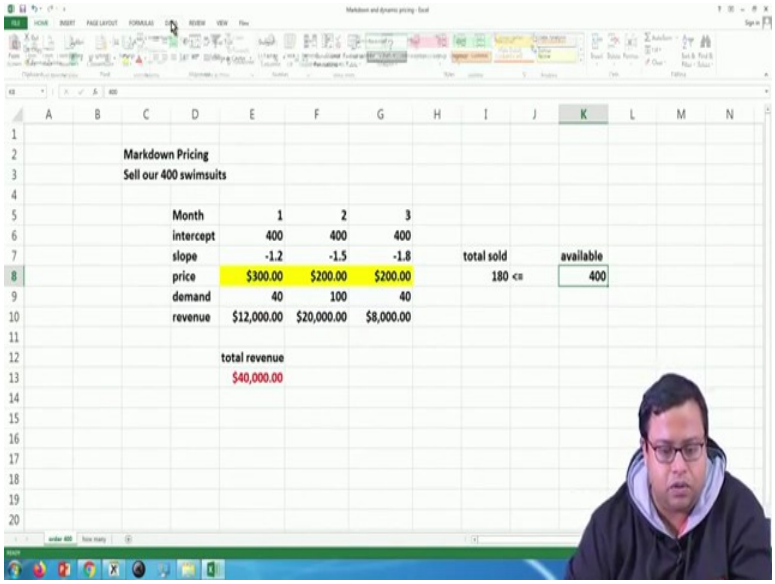

So, for example, let say we are talking about selling of 400 swimsuits in a and we have to sell it in 3 months we have decided. Now, in 1 month which is summer or let say you can even think about not even month, you can think about probably quarter, quarter 1, 2, 3 and if the data is permitted quarter 4 also.

Now, in the summer quarter the price will be, people will be less price sensitive, people will actually buy swimsuits because they would like to swim and then there are certain other type. So, probably in the winter then the I would say this swimming pools will be closed in certain for example, in some institutes in the whole winter the swimming pools remains closed or in certain other places also and they do not have probably the heater in that case there is a problem that if you try to and people also do not like to swim in, many people do not like to swim in winter or people will try to prefer swim more in summer than winter.

Now, if I have sell this 400 swimsuits and these are the 3 months of 3 quarters and this the intercept and this is the slope that means the demand = intercept × slope × price. So, d = a + bp that a is 400 and b is whatever is given here. So, these 3 values are random values written first and these are the 3 time periods when there are 3 different types of people of different I would say for of different price sensitivity will come.

So, these guys are more price sensitive - 1.8 and these guys are less price sensitive - 1.2 so people who are or less price sensitive will come during the summer season and off summer season these people will come. Now, these are then this is the demand and this is the revenue the formula and the total revenue is summation of these.

Now, I am selling by these by doing this pricing 300 200 and 200 I am selling 180. 180 available is 400, so what do I do, I go to data solver I say that maximize these total revenues by changing the 3 prices here which is E8 to G8 where I8 should be equal to 400 exactly equal to 400. So, I want sell everything I do not want to keep anything back so I8 is exactly equal to 400 and I try to solve this.

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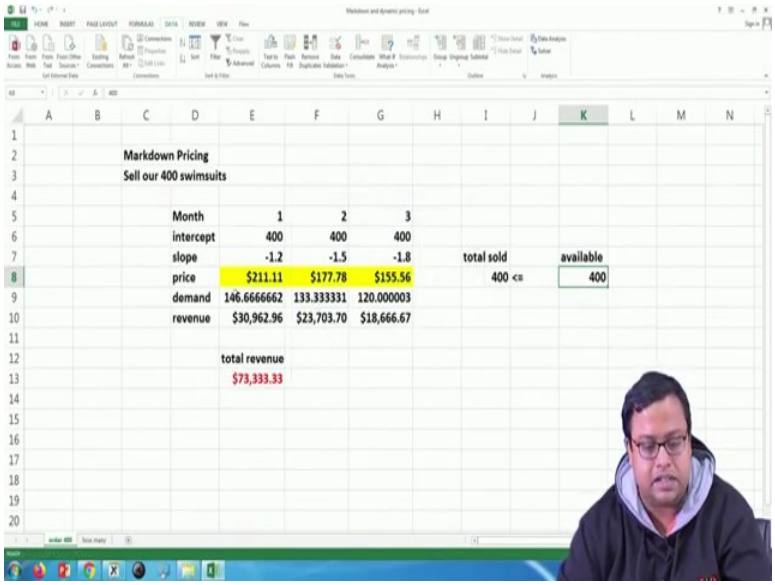

So, when I solve this it gives me some solution now, this is also not possible practically situation, practical situation is that these 3 things are also not possible.

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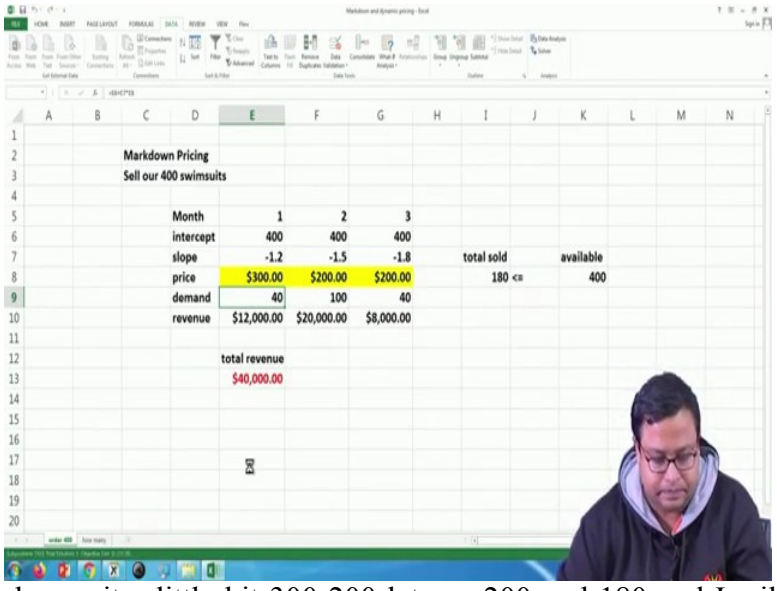

So, I will again change it a little bit 300 200 let say 200 and 180 and I will put up another these things that these 3 values has to be integer otherwise it is not possible so, okay. So, integer constant sell, so... to make this value integer, these 3 values can be integer that is so.

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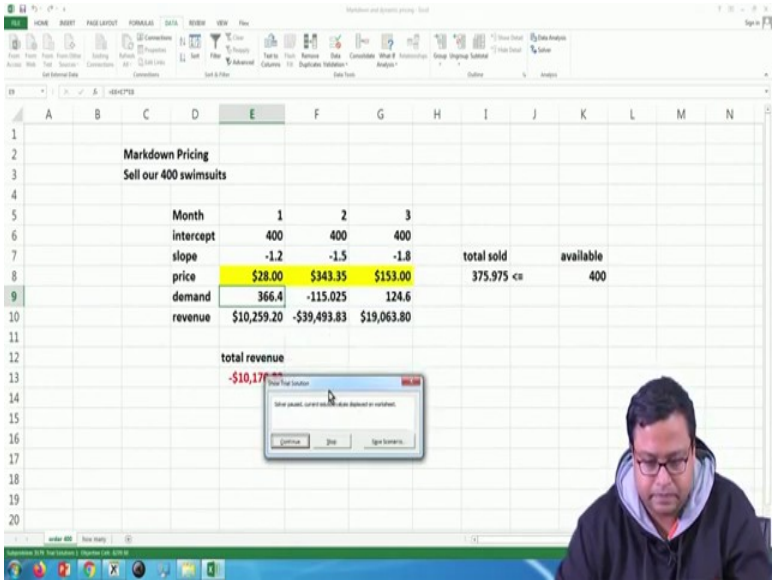

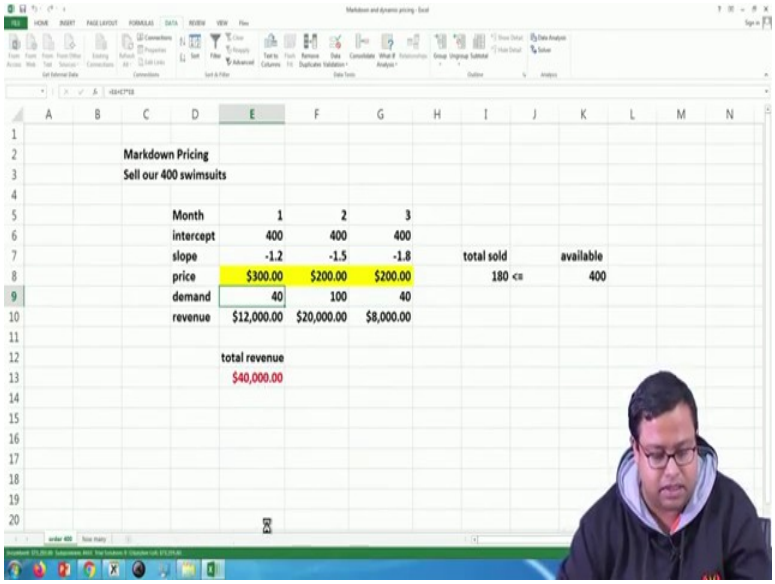

Now, if I try to solve it is taking some time, I will stop it once and I will go to solver once more and I will use evolution adding method and it saying evolutionary method means I have to give the upper limit and lower limit so the lower limit of these guys will be 0, and upper limit of these guys is let say around how much, 400 dollars or 500 ok solve. So, now, it running pretty fast and it is giving me certain 73000 see I have already got more than 40000 which is 73000.

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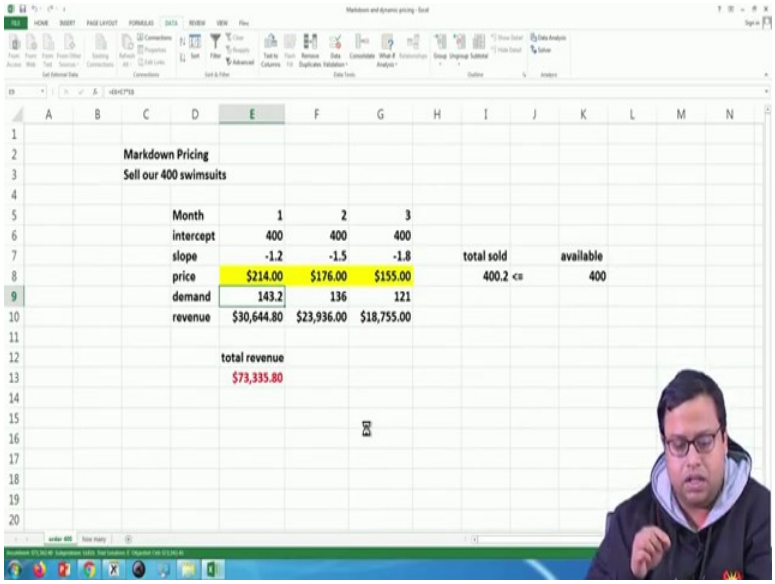

And I can stop it in between as usual I can stop it here I can say that this what I am getting, it is slightly higher than 400 so, I will continue a little bit more to see that if the prices are coming down and that is how I will do, so 214 I can change it 213 or something like that which is closest to the value that is there and I can find out the results. So, this is something is a possibility this is also possibility which we try to do.

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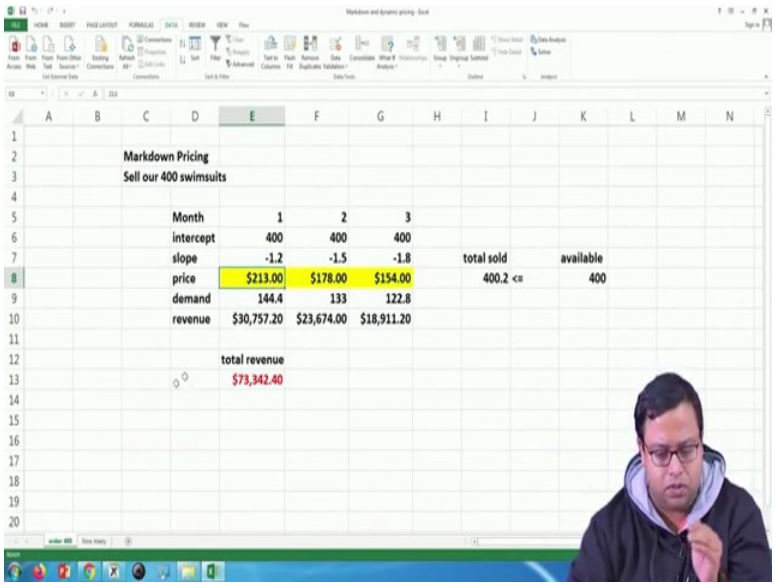

Now, price is actually so, this is the solution that I got this is 402 which is also not possible this one is also not possible so I have to do something to make sure that these guys are integer. So, I have to make so these guys are not integers in the current form. We have to take care of that when we done the regression, so when we done the optimization.

So, all I am trying to say here is this is one type of pricing one thing that you have notice clearly is that the slope goes up 1.2, 1.5, 1.8 the prices is also coming down to 213, 178 and 154 so I know that the last guy is more price sensitive so that is why I charging it much lesser than this but I am trying to take care of all the so initial we start with the higher prices, and slowly we go to the lower price it is always like that.

In the previous case when there was skimming pricing we gave some results when it was for let say for markdown pricing we are also getting the same result so initially you will charge high, and then slowly you come to low.

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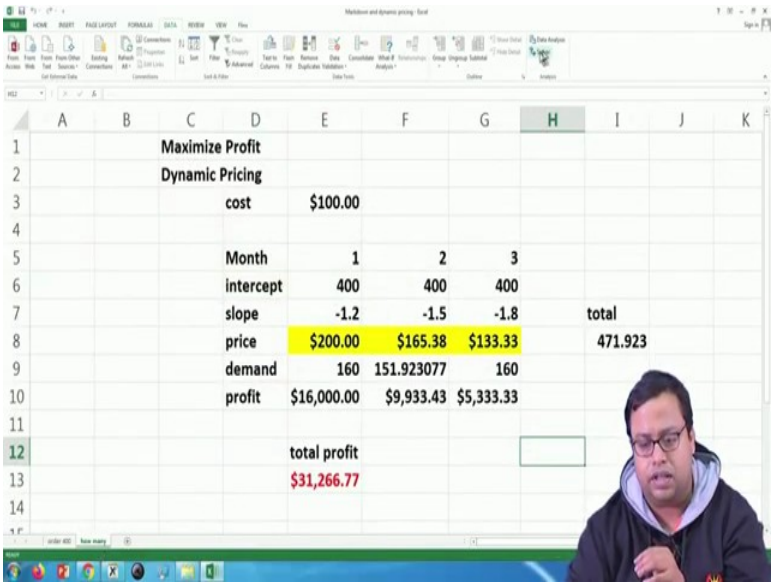

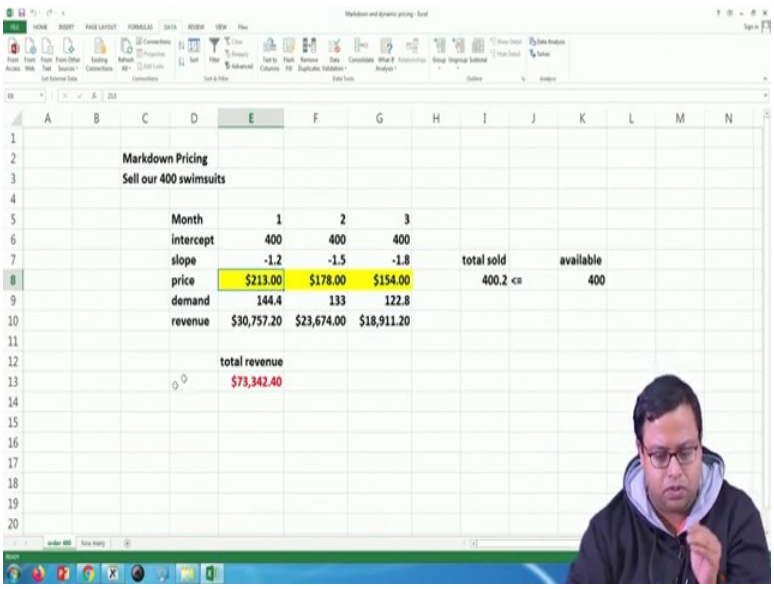

Now, next thing is, how many so this particular question is talking about that it is not only so, this constant is not there. Let say this 400 constant is not there and I am trying to solve this so

the everything remain same let say this 400 and 1.2, 1.5, 1.8 everything remains same but, this constant is not there.

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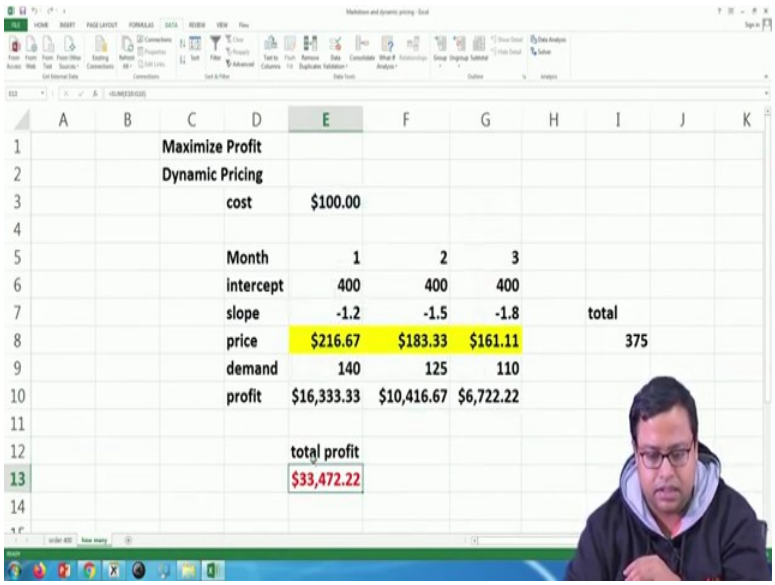

So, I want to try to solve, by maximizing this by changing E8 to G8. I will try to solve it and it is giving me a result which is 33000, so there is the cost involve here which has not been taken here, the cost is 100 dollars per production. So, now I am getting around 33000 so this is something which is also important.

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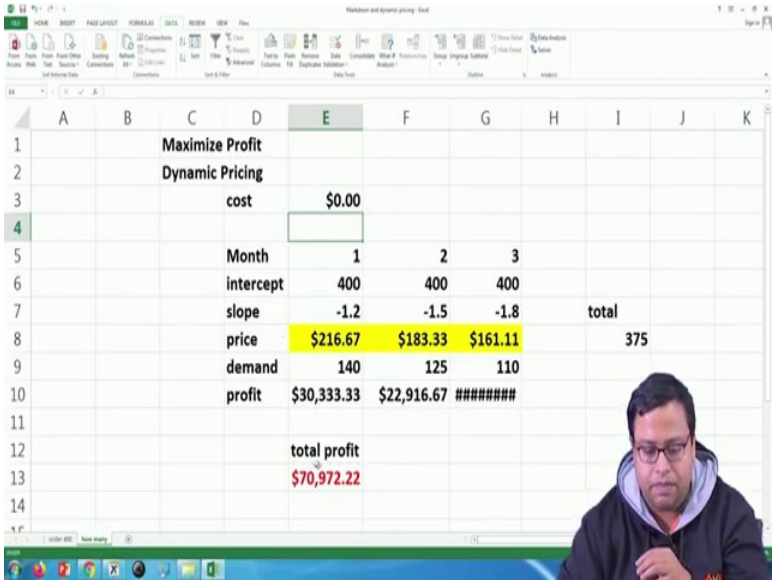

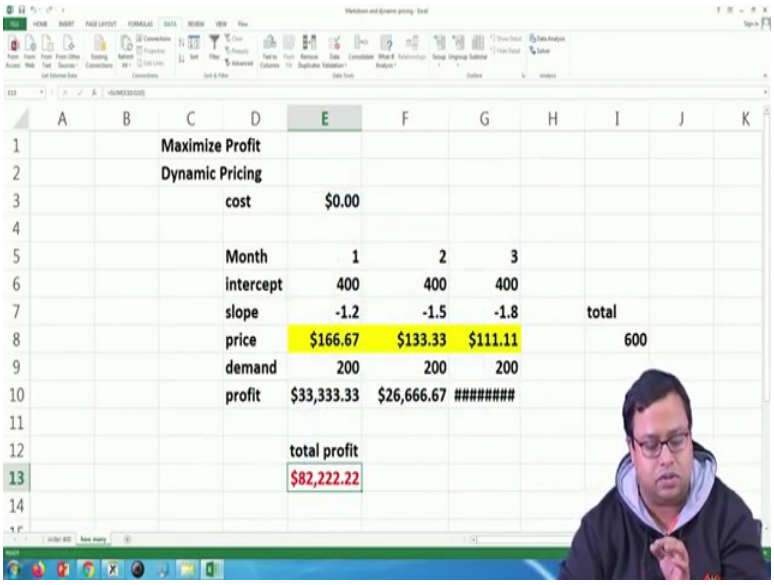

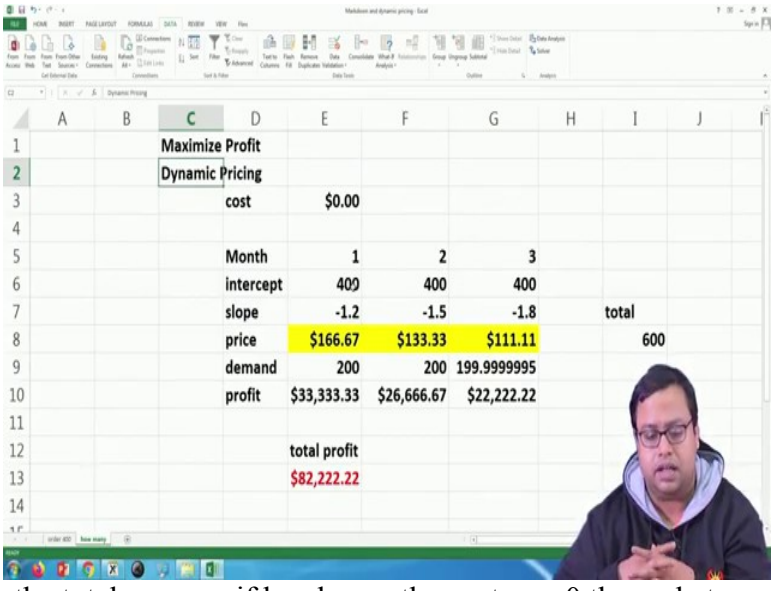

Then, the what is the total revenue if by chance the cost was 0 then what would have been the total revenue in this particular case then, the total revenue would have been 82000 so here, it was 73000 it was 82000 so, I have taken care of the cost part also in this particular problem.

So, often times we call it dynamic pricing because, you are changing the price based on the demand, based on the cost, based on the demand slope, how the slope of the curve, the price sensitivity of the curve is also changing your prices are also changing.

But still, one thing which is important to focus on is that the price is still dropping so, 166 to 133 to 111 and another important thing that is worth mentioning is see the price is much higher here 213 where when you have by chance if you do not have any kind of I would say price in capacity constraint you cannot charge much lower because, you can actually sell 600 instead of 400 total and still achieve your success.

So, that is also one type of pricing where we call it as dynamic pricing the previous one is markdown pricing the second one is dynamic pricing which is also heavily used in the context of products rather than services and we use that in the market. So, we will talk about other types of pricing like bundling and sells promotions in the next video and thank you for being with me see you in the next video.