Hello students myself Mrs. Kshama Desai. I'm going to present to you

today in this session margin of safety, angle of incidence and

desired level of activity.

1st, I'm going to discuss on margin of safety. Margin of

safety is the difference between actual sales and break even

sales or output. It may be expressed in percentage.

Higher margin of safety indicates the soundness of the

business. Margin of safety is having the formula total sales

minus break even point sales or profit upon PV ratio. It can

also be calculated as margin of safety is equal to sales multiplied by

 PV ratio.

Next concept which I'm going to discuss with you is angle of

incidence. It is the angle at which the sales line cuts the

total cost line . A greater angle of incidence indicates

higher profits which are made by the organisations and vice versa.

Generally, a larger or wider angle of incidence together with

high margin of safety, indicates the most favorable situation to

the business organization.

Desired level for desired level behaviour. I have just the

formulas we can see desired level is equal to fixed cost

plus desired profit upon PV

ratio. I have taken the small problem for to calculate margin

of safety and desired level.This is the problem where you

can see a certain period where the sale is given to you rupees

two lecs. The profit made is given to you rupees 20,000 fixed

overheads are given to you rupees 30,000, and they've asked

you to calculate PV ratio , Break.Even point , margin of safety and

the number of units to be sold to earn a profit of rupees

30,000 and also the amount of profit from the sale of rupees

three lacs. So last two things we can calculate desired level.

First part for calculating margin of safety.

We required PV ratio , break even point. So let us

calculate here first margin of safety . we

have the formula for margin of safety is equal to actual sales

minus Break Even sales. Break,even sales means break even

point to find break even point we have the formula fixed cost

upon PV ratio. So we required to find PV ratio, to find PV ratio

we have to to calculate CONTRIBUTION. PV ratio is equal to.

Contribution UPON sales multiplied by 100 this is required so we will start with

PV ratio.. Here contribution is not given to you. So let us calculate contribution.

Contribution is equal to formula sales minus variable cost. But

in our problem you can see variable cost is not there. They

have given you net profit. They have given you fixed overheads here.

so we can apply another formula to calculate contribution.

That is fixed cost plus or minus profit or loss or this is equal

to. You can say fixed cost. We want only contribution which is equal to fixed

cost plus profit. So we have got a fixed cost in our question you can

see fixed cost is given here rupees 30,000 profit is given

rupees 20,000. So 30,000 +20,000 you are getting ₹50,000.
This will be our contribution. Therefore we can calculate now PV ratio

because we have got contribution , there for PV ratio is equal to

you have got contribution 50,000 upon rupees two lacs i.e. sales

multiplied by 100 because PV ratio be always to be expressed in

percentages. Therefore we have to multiply it by 100. So we are

getting the answer 25%. OK now we have got. PV ratio. We have to calculate break even point. Break

even point is equal to formula fixed cost upon PV ratio. So our

fixed cost is given in the question. You can see here the

fixed cost which is rupees 30,000 , PV ratio we have just now

calculated is 25% so 30,000 Upon 25% . 25% means 25 divided by 100 we will

reverse it , it will be 30,000 multiplied by 100 upon 25 . So you are getting the answer rupees

one lac 20,000. Then margin of safety We have to calculate

margin of safety is equal to formula sales minus Break Even

Point sales. Sales figure is given in the question as Rs. Two lacs.

Break Even Point.Just now we have calculated is rupees one

Lac 20,000. So two lacs minus one lac

20,000 is equal to rupees 80,000. This is one way we can

calculate our margin of safety.

Another way of calculating margin of safety is profit upon

PV ratio. In this problem in the question profit is given which is

Rupees 20,000.

so 20,000 upon 25% is the PV ratio. So we have to reverse 25%, that is 100 upon 25 . You can make

20,000 multiplied by 100 divided by 25. So we can say it is reverse as 100 upon 25. When we

multiply it then the denominator will come as a numerator and the numerator will go as a denominator.

So your answer is rupees 80,000. So see here by applying both formulas

you are getting ₹80,000 is a margin of safety.

OK, now we have to calculate the last part of the problem. You

can see in the problem that they have asked you the number of units to be sold to earn a profit of

rupees 30,000. This is desired sale and amount of profit from a sale of rupees 3 lac at a desired profits or desired sales and desired profit way to calculate from last two sentences. So we can see sales required is equal to fixed cost plus desired profit upon PVratio. This is the formula fixed

cost is given in your question,rupees 30,000 desired profit is

given in the question itself rupees 30,000 upon PV ratio. PV Ratio We have

calculated 25%. So 30,000 +30,000 is 60,000 upon 25%.

which is equal to 60,000 upon 25% when you reverse it is 100 upon

25. So you are getting rupees Two lacs 40,000 is the sales required to earn a profit of

rupees 30,000. Now the next question is here.

The amount of profit when the sale given is rupees 3,00,000 . So same formula we're applying required

sales is equal to fixed cost plus desired profit upon PV

ratio. Therefore now in this formula we will see what is required

profit. Sales figure is given here 3,00,000 .
Fixed cost is given in the question 30,000 we have to

calculate profit .   Formula will be Sales is equal to   fixed cost   plus desired profit upon PV ratio. We have 300000 is equal to 30,000 plus desired profit divided by 25% . 3,00,000 is equal to 30,000 Plus Desired profit upon 25% . So 3,00,000 into we're making a cross multiplication. As you can see

PV ratio we have taken 25%. You can make cross

multiplication. 3 ,00,000 multiplied by 25%.This is the denominator when you

multiply it here we can take it here. We have to say multiplied

by 25% so three lacs   multiplied by 25% which is equal to 30,000 plus your desired

profit. So 3,00,000 into 25% means three lacs multiplied by 25 upon 100 we are

getting rupees 75,000 which is equal to rupees 30,000 plus

profit. Now you bring both the

amounts together. So rupees 75,000 minus 30,000 when we take

both the figures together. This plus 30,000 will be a minus 30,000

rupees, 75,000 minus rupees.30,000 is equal to desired

profit. Therefore desired profit is equal to the difference

between both (75,000 -30,000) which is rupees 45,000.

From this presentation we have learnt to calculate margin

of safety and desired level of activity.

Thank you.