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Setting: IS19 helps a student prepare for an upcoming exam.

Participants: IS19 (ITA; male, blue shirt), S1 (student, female, gray sweatshirt)

```
0:00
XXX IS19: sorry for the (.) inconvenience
XXX S1:
           ((opens a document on her computer))
XXX
           ((points to problem))
           to (.) the c?
XXX
XXX IS19: number three (.) part c?
XXX
           (topic)
XXX
           expenditure increase by (.) 250 without
XXX
           changing the tax so (.)
XXX
           um (.)
XXX
           that is the (.) delta G,
XXX
           the government-
XXX
           increase in government expenditure is (.)
           two hundred and fifty
XXX
XXX
           and (.) it (.) uh
           to see what is the change in the- (.)
XXX
XXX
           in the IS curve.
XXX
           so (.) remember you should use this formula.
           ((mathematical formula)) (one over one minus)
XXX
XXX
           (MPC times delta G)
XXX
           and you calculate this number.
          and (.) is (not given) the MPC,
XXX S1:
XXX IS19: it's- ((pointing)) it's this one.
          MPC if you have the consumption function
XXX
XXX
           then the MPC is this (.) coefficient.
XXX S1:
           zero point=
XXX IS19: =zero point eight.
XXX
           yes.
           it always (.) this value.
XXX
XXX S1:
          ((writing))
XXX
           and um (.)
XXX
           we have the- (.3)
          the change in,
XXX
XXX IS19: yeah income.
         °income°
XXX S1:
XXX IS19: and (.) uh (.)
           you add this number into th- your (.)
XXX
XXX
          previous (.)
```

```
uh (.) IS curve.
XXX
XXX
           so what do you have (got this)?
XXX
           ((looking through papers))
           ((points))
XXX
XXX
           is this one right?
           and you just add these number (.2)
XXX
XXX
           ((circling something in pencil))
XXX
           into this (.) constant.
           so in part D you have calculated uh (.2)
XXX
           the IS curve.
XXX
XXX
           ((reading))
           °so°
XXX
           I mean first you should calculate (.)
XXX
           ((pointing to S1's paper))
XXX
XXX
           uh you should simplify this (.)
           this (equation). (.2)
XXX
XXX
           and get uh (.2)
           ((reading off of computer))
XXX
           °so it's the part B,°
XXX
           and (.) whose (market) is in (.)
XXX
XXX
           (equilibrium)
XXX S1:
           ((pointing)) and the=
XXX IS19: =uh (.) yeah.
XXX S1:
           and (.) did the (.) IS graph.
XXX IS19: yeah
XXX S1:
           and when the (.2) and (.)
XXX
           (will it) increase the (.) income in the (.) graph
XXX
           ((indiscernible))
XXX IS19: uh: no because, (.)
           here there is a condition that Y is constant.
XXX
           and equal to this long (variable) five thousand.
XXX
           so (.) first you should in part b you should get this
XXX
XXX
           IS curve.
           and then you set this Y equal to (.)
XXX
           five thousand because it- it is constant
XXX
XXX
           and equal to this (long variable).
XXX
           so you cannot (.) change this (.) income.
           isn't (.) this graph (correct)?
XXX S1:
XXX IS19: hold on ((alt trans: no))
XXX
           you should (.) you should draw like this
           because your (.) income is fixed-
XXX
           is a fixed variable. ((alt trans: value))
XXX
3:00
```

```
XXX S1:
         so wouldn't the: (.)
XXX
           in the long run the income is fixed?
XXX IS19: yes.
XXX
           because ((pointing))
XXX
           you see in the: condition (.) here.
           income is constant and equal to this (.)
XXX
XXX
           long variable.
XXX
           five thousand.
           this tells you the Y is fixed (.) ((pointing))
XXX
           °in the long run.
XXX
           and you cannot change,
XXX
XXX
           ((watching S1 write))
XXX S1:
           and (then do) -
XXX IS19: so in part b you should (.) plot this number.
XXX
           Y equals to five thousand into this (.) equation
XXX
           and you can solve for the (.) increase rate.
XXX S1:
           um (.) and the- the results of this
XXX
           equals this (.) point zero?
XXX
           because the Y is (didn't change).
CLF IS19: uh: oh. (.) wait.
CLF
           ((reading))
CLF
           increase by (.) what would be ((indistinguishable))
CLF
           oh (.) yes. sorry.
           I-I-I made a mistake so (.)
CLF
           I forgot that (.) this question is the- (.)
CLF
XXX
           so.
XXX
           uh (.2)
XXX
           yes. Y- this Y meets the-
XXX
           uh the income equilibrium.
XXX
           that means (.) that you at least number
           that this IS curve will shift.
XXX
XXX
           so this (.) IS curve will be different but this (.2)
XXX
           income equilibrium will be the same.
           so this is your previous (.) IS curve.
XXX
XXX
           which you calculated in part B.
XXX
           and this is your new IS curve.
XXX
           and to (.) solve for this IS curve, you need to calculate
XXX
           this (.)
XXX
           ((unintelligible)) MPC times delta G.
XXX
           so that's two different things.
XXX
           ((pause))
           ((points to S1's paper))
XXX
XXX
           you calculate this-
```

```
this is not um (.) the:
XXX
XXX
           changing income equilibrium.
XXX
           it's just the change in this
XXX
           uh our IS curve.
XXX
           you calculate this because you want to calculate this.
           you wanna compute this new IS curve.
XXX
XXX
           not for the (.) um (.)
XXX
           income equilibrium. (.2)
XXX
           so (.2) so this Y is uh (.)
           is the (.) income equilibrium.
XXX
XXX
           it's the intersection.
           but (.) here what you calculated for this delta Y
XXX
           is the- (.2)
XXX
           is the (.1) difference in these two curves.
XXX
XXX S1: uh (.) then you this (.) (fraction) ((indistinguishable))
XXX IS19: you- you need this to cal- compute
XXX
           this newer IS curve.
         °IS curve°
XXX S1:
XXX IS19: and- (.1)
           and this Y,
XXX
XXX
           this income is always fixed.
XXX
           so (.) and then you can find its equilibrium
XXX
           and for this equilibrium,
           you (S) always (.) this value five thousand
XXX
XXX
           but you increase rate will be different.
XXX
           it won't shift (.) from this line to
XXX
           this one,
XXX S1:
           can you show me the=
XXX IS19: =ok.
XXX
           sure.
           the first for part b you can use this (.)
XXX
           function to calculate the IS curve right?
XXX
XXX
           and you
6:00
XXX
           set Y equals to five thousand because
XXX
           it is fixed (.) in the long run.
XXX
           it's constant in the long run.
           and you plug this number in-
XXX
XXX
           into this equation
XXX
           you will get a (little) for
           increase rate.
XXX
           that is for (.) part b and from the (.) graph,
XXX
XXX
           it is this point.
```

```
this is your IS curve.
XXX
XXX S1:
          [(this?)
XXX IS19: [this is (.)
XXX
          the Y equals to seven thousand (minus),
XXX S1:
          and the R one (.) is,
XXX IS19: R one is this number.
          when (.) the (.) income level is: (.)
XXX
           seven thousand,
XXX
           °this is your intersection.
XXX
XXX
          this intersection is the income.
XXX
          ((pause))
XXX S1: ((mumbles))
XXX IS19: this is (.) what you want because you want to calculate
          you al- you always want to calculate the (.)
XXX
XXX
          equilibrium increase rate.
XXX
          so you must (.) find this (.) uh intersection.
XXX S1:
          um,
XXX IS19: and for part c,
XXX
          you calculate this delta Y because
XXX
          you want to calculate this new IS curve.
XXX
           so if there is an increase in government expenditure
XXX
          this IS curve will shift to the (.) right.
XXX
          right,
           and you want to (.) find out (.)
XXX
           "uh" what is the exact (.1)
XXX
          shift to this,
XXX
XXX S1:
         so this is the (.) delta Y?
XXX IS19: yes.
XXX S1:
        ok
XXX IS19: exactly.
          so when you find this delta Y
XXX
XXX
          you will add this (.) number directly into (.)
XXX
           ((circling with pencil))
          this one this constant. (.2)
XXX
           so (.) so that may (.)
XXX
XXX
          that may do this because in this case it's (.2)
          it's one over
XXX
          one minus zero point eight.
XXX
XXX
          (this equation) times (.) delta (.) G which is
XXX
          two hundred (.) fifty.
          so it's (.)
XXX
          one (.) divided by (.) zero point two,
XXX
```

```
XXX
           times (.2) ((leans in towards computer to read))
XXX
           two hundred fifty.
XXX
           it's one thousand (.2)
XXX
           one thousand two hundred and fifty. (.)
XXX
           right,
XXX
           and you add this number (.2)
XXX
           to the constant term of the previous (.) value
XXX
           one thousand two hundred fifty so it becomes
XXX
           eight thousand (.) two hundred and fifty.
           so (.) this one is your new (.) IS curve.
XXX
XXX
           so you (.) plot it in the graph
XXX
           this is your new IS curve.
XXX S1:
           and,
           this is when the (.1)
XXX
XXX
           um Y is equal to zero,
XXX
           so,
XXX
           we get the ((indistinguishable))-
XXX IS19: yeah Y is (.)
XXX
           always equal to five thousand.
XXX
           and (.)
XXX
           the intersection of (.) this line this (.)
XXX
           ((hand gesture))
           (vertical) line.
XXX
           with this (.) new IS curve.
XXX
XXX
           this intersection.
           °ok°
XXX S1:
XXX IS19: is the (.) new equilibrium
XXX
           and you solve it for the new increase rate.
XXX S1:
           °(alright).
XXX
           and then, um,
9:05
XXX
           this one.
XXX
           (four fifteen)?
XXX IS19: ((reading))
           ((indistinguishable))
XXX
XXX
           so (.3)
XXX
           so just (center) on this part
           so (.) it will increase the e- expected inflation.
XXX
XXX
           so if there is uh
XXX
           ((pause while he points))
           ((indistinguishable)) means ah (.)
XXX
XXX
           so you do not- (.)
XXX
           don't uh worry about this word.
```

```
XXX I1:
           [ok
XXX IS19: [uh
XXX
          you only need to (.)
          pay attention to this words
XXX
XXX
         increase e-ex-expected inflation.=
XXX I1:
          =0k=
XXX IS19: =so that means, uh
XXX
         if the expected inflation increase,
          that means your demand (.)
XXX
          to hold money (.) will (.)
XXX
XXX
          decrease.
XXX
          ((hand gesture))
XXX
          will go down.
XXX S1:
         [((inaudible))
XXX IS19: [because
XXX
          uh a increase in the expected (.) um inflation means
XXX
          the val- uh the value of the money,
XXX
          will go down.
XXX S1:
         the price now (it will) (.)
          [decrease?
XXX
XXX IS19: [no there is no (price) level [here
XXX S1:
                                        [oh
XXX IS19: so only (.) the value of the money
          it (.) must go down because
XXX
XXX
          there is a increase in the (.) inflation
XXX
          in the (.) expected inflation.
XXX S1:
         ((nodding))
XXX IS19: so if there is (.)
          ((hand gesture))
XXX
          higher inflation that means
XXX
          your (.) money is less valuable
XXX
XXX S1: [so then (.) ((inaudible))
XXX IS19: [it will
          cause a decrease in your money demand.
XXX
         mm.
XXX S1:
XXX
          and uh,
XXX IS19: and then you can (.2)
           ((gets piece of paper))
XXX
XXX
           ((starts writing))
XXX
          uh show it in the (.) graph in a
XXX
          (L- LM) curve.
          ((watching S1 write)
XXX
XXX
          yes so
```

```
XXX
           ((writing))
XXX
           so remember this graph (.) is for the (.)
XXX
           money to (equilibriate)
XXX
           uh (.) no that me-
XXX
           I mean
XXX
           if you can (.) remember the result for the IS curve
XXX
           so this is the
XXX
           ((grabs an eraser))
XXX
           ((erases))
           LM curve
XXX
XXX
           because (.) the money to (reach) demand
XXX
           will only uh effect LM curve
XXX
           [right?
XXX S1:
           [yes
XXX IS19: so (.) this is your LM curve
XXX
           and if you have a (.) decrease in the (.)
XXX
           real money demand (.)
           then it will shift to the (.) right.
XXX
XXX
           because it's (money demand).
XXX
           if (.) there is an increase in money supply
XXX
           uh- uh- sorry (.) decrease in money demand.
XXX
           your money demand goes down.
XXX S1:
           veah.
XXX IS19: so the (.) LM curve shift (.) to the right.
XXX
           but if your money supply goes down it will shift (.)
XXX
           to the left.
XXX
           so they have (.)
XXX
           opposite effect.=
XXX S1:
           =so the LM it (relate) to the (.)
XXX
          [money supply?
XXX IS19: [money-
XXX
           and money demand.
XXX
           both- both of these (.) factors will
           effect this
XXX
           LM curve.
XXX
XXX
           but they have opposite effect.
XXX S1:
           oh:.
XXX IS19: so (.) let me write if your (.)
XXX
          money this is money demand right?=
XXX S1:
          =mhm.=
XXX IS19: =if your money demand goes up
           then this LM curve will (.)
XXX
XXX
           ((writing))
```

```
12:00
XXX
          shift to the left.
XXX
          if (.) money demand goes down
XXX
          this LM curve will shift to the right.
XXX
          ((writing))
          and for the money supply
XXX
          it has (.) opposite effect.
XXX
          if the money supply goes up (.)
XXX
          LM curve will (.) shift to the right.
XXX
XXX
          and if money supply goes down (.)
          this LM curve will shift to the (.) left.
XXX
XXX S1: why is th- shift to the (.) left?
XXX IS19: when: money demand goes down it- (.)
         so then you need to refer to this (.)
XXX
XXX
         graph in (.) money
XXX
         to market equilibrium.
XXX
          so remember
          in this graph
XXX
         what they have this (.)
XXX
XXX
         curve is a money supply.=
XXX S1: =oh.=
XXX IS19: =and this is your (.)
XXX money demand.
XXX S1: ((nods))
         this curve is your money demand.
XXX
XXX S1: oh.
XXX IS19: so if your money demand goes up, (.)
XXX
        then this curve will shift to the right.
XXX S1: (and then) (.) is like,
XXX IS19: because your money demand increase
          so for given level (.)
XXX
XXX
          increased (.) this-
XXX
          uh this access is increase rate and this is your (.)
          money demand money supply
XXX
XXX
          is (.) real money.
XXX S1:
         °mm.
XXX IS19: so (.)
XXX
          if your money demand increase that means for given level
XXX
         of increase rate,
XXX
          your money demand will (.) be higher.
XXX S1: so (increase) rate will be (high)?
XXX IS19: no.
XXX
          I just want- want to see what is the effect
```

```
of (.) uh
XXX
XXX
          increase in the money demand.
XXX
          so you need to (.
XXX
          to see this effect you can fixed (.)
XXX
          uh level for interest rate.
          because (.)
XXX
          if you have an increase in (.) money demand
XXX
          that means for given level
XXX
          of interest rate
XXX
XXX
          the real money demand will be higher.
XXX
          for each point.
          for this point,
XXX
          i- your money demand may be this value
XXX
          and for (.) another interest rate
XXX
          the money demand will be another value.
XXX
XXX
          so for every (.) point
XXX
          in the (.) interest rate,
          you will have a higher (.) money demand.
XXX
          so when: (.) the: money demands increase and the (.2)
XXX S1:
XXX
          interest rate (.) always increase?
XXX IS19: mm no.
XXX
          uh
          it will only cause a (.) shift (.) in this-
XXX
          in this curve.
XXX
          in the whole curve.
XXX
XXX S1: [so
XXX IS19: [now I am talking about
          this (.) money demand not uh
XXX
          intersection.
XXX
         um: money demand?
XXX S1:
XXX IS19: this (.) whole curve
XXX S1: so (.) uh which one is changing?
XXX
         [so
XXX IS19: [this uh
XXX
          this- this curve
          it will shift to the right.
XXX
XXX S1:
          °it will shift ((inaudible))°
XXX
          uh how this curve relates
XXX
          ((points))
XXX
         to this,
XXX
         [curve,
XXX IS19: [so you
XXX i- so if this (.)
```

```
15:00
XXX
          um uh,
XXX
          so if this curve shift to the right,
XXX
          then this (.)
XXX
          intersection
XXX
          will (.) go up,
XXX
          will uh- will shift from this one to this one.
XXX S1:
          ((inaudible))
XXX IS19: right.
XXX S1:
        uh
XXX IS19: because we- we are looking for the equilibrium
         in this market.
XXX
         so remember
XXX
          when we talk about equilibrium we (.)
XXX
XXX
          always (.) want to
          get this (.) intersection of the two curves.
XXX
XXX
          because LM curve is uh
XXX
          happens in the: uh
XXX
          in the equilibrium of the money to the market.
XXX S1:
          and then,
XXX IS19: so (.) um
XXX
          so for given
XXX
          now let's look at this curve so
XXX
          that means for given value of- um
XXX
XXX
          for give- uh (.)
XXX
           I mean for given value of income
XXX
          your interest rate will (.)
XXX
           ((writing))
XXX
          will go up.
XXX
          so.
XXX
           ((pause))
XXX
          so uh
          so for given value of Y
XXX
          you will have a higher interest rate
XXX
XXX
          that means this LM curve will (.1) go up and to the left.
          it will shift "in this way.
XXX
XXX S1:
          um,
XXX
          ((pause))
          um (.) this "curve"
XXX
          ((pause))
XXX
XXX IS19: so when you (.) uh
XXX
          conce- um when you consider the shift of this LM curve
```

```
XXX
          you c-
XXX
          what you need to think is to fix the:
XXX
          point.
XXX
          (miner-) either to fix this (.) interest rate
XXX
          or fix this income level.
          and see for given level of income,
XXX
XXX
          whether this interest rate will go up or,
XXX
          go down.
XXX
          you need to consider
          all the (.1) (all) this point.
XXX
XXX
          you- you- you can fix another one and then
XXX
         this interest rate will
XXX
         also go up.
         °ok.
XXX S1:
XXX
          so it's (.1) in the (.3) (shop wrong) to
XXX
         the income is fixed?
XXX IS19: no is
        it has no (.3)
XXX
XXX
         is different ah
XXX
         these are two different things.
XXX S1: [oh
XXX IS19: [so
         when we consider the shift of this curves,
XXX
          uh:
XXX
          ((pause))
XXX
XXX
          it's no relationship with the (.1)
XXX
          short run or long run.
XXX
          so the short run and the long run
XXX
          it's only (.) uh
          about the price level.
XXX
XXX S1:
         oh.
XXX IS19: but (.1) but here we only want to see the- (.2)
XXX
        uh the effect on this curve.
18:08
XXX S1: mhm.
XXX IS19: mm
XXX
         so you are confused (.) about this short run effect right?
        yeah.
XXX S1:
XXX IS19: so (.3)
XXX
         this short run means the price level is fixed.
        so remember for this LM curve
XXX
```

```
it (.1)
XXX
XXX
           ((writing))
XXX
           means the (.) uh
           real money demand equals to the (.1)
XXX
XXX
           real money supply.
XXX S1:
           oh.=
XXX IS19: =so in the short run
XXX
          this (.1) p is fixed
           so we only need to consider (.2)
XXX
XXX
           um whether there is a (.)
           change in this (.) money (.) demand
XXX
XXX
           or there is a change in this money supply.
           so we do not (.) consider this-
XXX
XXX
           this P.
XXX S1: oh
XXX IS19: so (.) that's the meaning for (.) the short run.
XXX
           so you do now need to consider the (.1)
XXX
           the change in the price level.
XXX S1:
           ok.
XXX
           ((inaudible))
XXX
           ((points)) this is (.) the:
XXX
           short, long, effect,
XXX IS19: yes
           the long run (.) is
XXX
XXX
           uh in the long run you should consider the- (.)
XXX
           the AD curve and the AS curve.
XXX S1:
          [oh
XXX IS19: [so
XXX
           uh (.) in the long run,
XXX
           um (.1) the axis is still y but the
           Y axis will be price.
XXX
XXX
           so that's the different (.) with the
XXX
           short run.
           but now this is because for the short run,
XXX
           this is- (.3)
XXX
XXX
           this is for the short run.
XXX
           and you should use the IS LM model.
           so (.) this axis will be Y and this
XXX
           will be increase rate.
XXX
XXX
           but in the long run
           you should use this (.2) uh
XXX
           AD AS model.
XXX
```

```
so this will be the (.) income
XXX
XXX
           and this is the price level.
XXX
           so (.) and in the long run the supply
XXX
           its AS curve will always (.) be fixed at uh
XXX
           income level.
XXX
           and
XXX
           the AD curve is always downwards.
XXX
           it's (.) decreasing.
           it's a decreasing function.
XXX
XXX
           ((reading))
           so (.) for- (.) for the chart,
XXX
XXX
           ((pause))
           so if there is a (.3) in the short run and in the long run
XXX
XXX
           so
XXX
           ((pause))
           uh you mean how it
XXX
XXX
           adjustment of the price,
XXX
           so if there is a-
XXX
           if the price goes up,
XXX
           so in the short run it will influence this (.) ah (.2)
XXX
           this um
XXX
           this money supply.
XXX S1:
          uh:,
XXX IS19: ((pausing to read))
           so because i- in the short run there is a i-
XXX
XXX
           ah increase in the income because
XXX
           the price level is fixed,
XXX
           but in the long run,
           um the income will fixed at this (.2)
XXX
21:00
           long run level.
XXX
XXX
           so (.1) this price will- (.) will- will rise.
XXX S1:
           and (.) is this (.) the: supply form
           is it demand "if it's (.) like,"
XXX
XXX IS19: no this (.) Y- (.) Y upper bar is the (.)
XXX
           income in the long run.
XXX
           this Y bar. Y upper bar means
           income in the long run.
XXX
XXX
           and it is a fixed- oh sorry.
XXX
           and it is a fixed number.
          but this (.) Y means the:
XXX
           income in the short run i- in equilibrium.
XXX
XXX S1: does this in the equilibrium=
```

```
XXX IS19: =yes=
XXX S1:
           =(have) (.) um
XXX IS19: because you see in the short run equilibrium
XXX
           this Y is the (.) value in equilibrium
XXX
           and this Y is the value in the long run.
XXX
           ((points))
XXX
           this Y bar.
XXX
           ((pause))
           and in the long run the price level will adjust (.2)
XXX
           will change so that this (.)
XXX
           um (lower P) will be the same.
XXX
           but in the short run this price level will be fixed.
XXX
XXX
           (.1)
           so that's why this Y will be different.
XXX
XXX S1:
           and Y (.1) u:m (.2)
XXX
           when the prices falls and the (.) (SRS)
XXX
           to move down,
XXX IS19: ((reading))
           (P) gradually force (yeah),
XXX
           °in the (.) short run,
XXX
XXX
           °if there is a (.1) decrease,
XXX
           um:↑
XXX
           ((shuffling paper))
XXX
           ((writing))
XXX
           so.
22:39
XXX
           ((no audible dialogue, IS19 occasionally whispers to
XXX
           himself))
22:56
XXX IS19:
           °this is your LM curve this is your (.) IS curve°
           and this is at equilibrium this is Y bar.
XXX
XXX
           so.
           in the short run this IS curve move to the-
XXX
XXX
           (.3) ((writing))
XXX
           move to the left, (.1)
XXX
           right. because and (.)
XXX
           also the price level is fixed,
           so the LM curve is (.) also (.1)
XXX
XXX
           it doesn't shift.
XXX
           and,
XXX
          in this AD curve,
XXX
           (.2) ((writing))
XXX
          so it's Y here
```

```
°it's Y here.°
XXX
           °it's Y° (.) price level.
XXX
           so in the (.) short run this-
XXX
XXX
           (.2) ((writing))
XXX
           this AD curve will also shift to the-
           ((pause while writing))
XXX
           shift to the:- to the left.
XXX
XXX
           but uh
           then this IS- uh this LM curve will-
XXX
           I mean this price will adjust,
XXX
XXX
           um because (.1) I mean
XXX
           in the long run,
           you always need to fixed in this level.
XXX
24:01
XXX
           for the income.
XXX
           so (.) that means this AD curve (.) will (.)
XXX
           go back.
XXX
           (.2) ((writing))
XXX
           because in the short run it moves,
XXX
           to the left.
XXX
           and in the long run it will go back to this: level.
XXX
           (.2) ((writing))
           and since (.1) and the other two achieve that.
XXX
           you LM curve must (.) shift
XXX
XXX
           (.1) ((writing))
XXX
           to the right.
XXX
           that means (.) this (M)
XXX
           (.1) ((writing))
           this real money supply will-
XXX
XXX
           (.) ((writing))
XXX
           will increase.
XXX
           because you always want to fix this (.) um-
XXX
           fix this uh
           income equilibrium.
XXX
           so your LM curve shift to the right.
XXX
XXX
           and in order to do this, this,
XXX
           ((circles))
           real money- (.1) real money supply will goes up.
XXX
XXX
           and since your money supply is fixed,
XXX
           that's means your price level must go down.
           °ıım°
XXX S1:
           it doesn't change the LM and the (.1)
XXX
XXX
           buildup?
```

```
((inaudible))
XXX
XXX IS19: no.
XXX
          no you have to shift the-
XXX
           ((pointing)) this LM curve.
XXX
          because in the long run,
           your price level will (.) always change.
XXX
XXX
           it will a- adjust so that this ((pointing))
           equilibrium will be fixed in this level.
XXX
XXX S1:
           and the (.) SI will um
XXX
           (in the)
           ((inaudible))
XXX
XXX IS19: "um: (.2) short run."
           °the short run yes.°
XXX
XXX
          yes because,
           (.3) ((pointing with pencil))
XXX
XXX
          in the short run,
XXX
          your AD curve move to this line and
          so this line will move the
XXX
XXX
          ((pause while writing))
XXX
          from here to here.
XXX
           ((pause while reading computer screen))
XXX
           so this is your (.1) (essay) (.) uh short run,
           aggregate supply line,
XXX
           and this is your (.1)
XXX
XXX
          uh short run aggregate supply line after the change
XXX
          after the shock.
XXX
          so it will move down to this level.
XXX S1:
          uh:
XXX
          so the (.) aggregate supplies depend on the
XXX
          aggregate demand
XXX IS19: in the short run.
XXX S1:
        in the short run
XXX IS19: yes.
XXX S1: um (.) how about the arrow?
XXX IS19: in the lo-
          in the long run it will be this curve.
XXX
XXX
          you see it's the long run aggregate supply and this
          SR is the short run.
XXX
XXX
           ((pointing at screen))
          so in the long run it will be this curve.
XXX
          and in the short run it will be (.) this one.
XXX
XXX S1:
          ok.
XXX IS19: this (.) uh
```

```
but will the long run (.) aggregate supply change,
XXX S1:
XXX IS19: it will go back to (.)
27:00
XXX
          the previous level.
          uh: where is it,
XXX
XXX
          so
XXX
           (.1) ((writing))
           °in the short run
XXX
XXX
           ((pause)) ((writing))
27:11
XXX
          ((no dialogue while IS19 writes))
27:32
XXX IS19: uh
XXX
          sorry.
XXX
          this is (.1) uh this 82 is the (.2)
XXX
          is the long run.
          um °eighty two the long run.°
XXX S1:
XXX IS19: because um
XXX
          ((looking at computer screen)
XXX
          you're asking the (.) long run aggregate demand
XXX
          right?
XXX
          so (.) it is this curve.
          this 82.
XXX
          so it will not go back. (.2)
XXX
XXX
          it will not go back.
XXX
          it will (.1) go to this one so
XXX
          let me re- restate it.
XXX
          so after this shock (.1)
XXX
          um (.1) so this is the long run level,
XXX
          this is the
           (.2) ((writing))
XXX
XXX
          pre-previous AD curve.
XXX
          and
           (.1) ((writing))
XXX
XXX
          so this is the short run supply this is the long run (.)
XXX
          aggregate supply.
XXX
          this is the (.) short run,
XXX
          aggregate supply.
XXX
          so in this- in the short run,
XXX
          this curve will: go down.
XXX
          ((pause)) ((writing))
          to this level.
XXX
XXX S1: is the price in the short run,
```

```
is fixed?
XXX
XXX IS19: u:m
XXX
           (.3)
XXX
           yes the price should be fixed but (.)
XXX
XXX
           ((pause)) ((looking at computer screen))
XXX
           but they are- (.2)
XXX
           but in the short run they are not in equilibrium.
XXX
           so
XXX
           and this is for
XXX
           supply.
           and that is for the (.1) money demand.
XXX
           so °uh
XXX
XXX
           ((pause)) ((reading))
XXX
           the short run
           ((pause)) ((reading))
XXX
XXX
           P gradua- gradually
XXX
           ((pause)) ((reading))
XXX
           yes it should go down.
XXX
           gradually.
XXX
           not (.) uh (.) I mean (.)
           it will (cause) sometime.
XXX
30:00
XXX
           j- this uh (.) short,
XXX
           this short run aggregate supply will (.1)
XXX
           goes down gradually.
XXX
           not (.) immediately.
XXX
           this level.
XXX
           but (.2)
XXX
           in the long run
           it will (.1)
XXX
XXX
           go at this level and this AD curve will shift.
XXX
           (.1) to um to this new curve.
           to this new one.
XXX
           so all this will- (.) will be changing gradually
XXX
XXX
           not (.) immediately.
XXX S1:
           and- (.) and the: (.1)
XXX
           when the price one is change to price two so:,
XXX
           this,
XXX IS19: uh both- both this
XXX
           short run aggregate supply and this IS (.) (arrow one)
curve
XXX
           will be shifting.
```

```
because (.) if P goes down,
XXX
          this LM curve will shift to the (.) to the right
XXX
          which cause this AD curve shift to the left,
XXX
XXX
          and it will also cause the short run (.1)
XXX
          aggregate supply goes down.
          and finally in equilibrium.
XXX
XXX
          it will reach (.) this level.
XXX
          so that's why this is always the (.2)
XXX
          long run,
XXX S1:
          um,
          first the short run (.) SRS will (.1) uh shift
XXX
XXX
          [and the
XXX IS19: [gra- gradually goes down.
XXX S1: ((inaudible)) and the price will (.1) change,
XXX
          so the LM will change
XXX IS19: yes.
XXX
          [and (.) now
XXX S1:
        [so the aggregate demand will change
XXX IS19: yes.
XXX S1:
         but why the (.) (SRS) will change first?
XXX
          cause-
XXX IS19: uh this-
XXX S1: cause?
XXX IS19: yes because
XXX
          uh:
XXX
         because the Y
XXX
         because the income uh
XXX
         or the demand is
          less than the:
XXX
          long run level.
XXX
          so that means your-
XXX
XXX
          your demand is-
XXX
          is decreasing.
          your demand is less than the long run level.
XXX
          so (.) you will (.)
XXX
XXX
          decrease (the) price to match the supply and demand.
XXX S1:
          ((long pause))
XXX
          and (.) the-
XXX IS19: the price will go down because
XXX
          now here you are um (.1) the income is not in the
          equilibrium level in the long run equilibrium.
XXX
          it is less than the (.1) than this one.
XXX
          so that means your demand is not (.1)
XXX
```

```
XXX
          °uh
XXX
          (.3)
XXX S1: [so (.) it cause the price level to change?
XXX IS19: [i-
XXX
        yes.
XXX S1: so is cause the [(.1) (SRS) to change,
XXX IS19:
                         [sh-short run
XXX
        yes.
XXX S1: ok.
XXX IS19: ((reading screen with S1))
XXX S1: for this construct-
XXX IS19: "suppose that (.) increase (.1) and (.1)
          °short run effects
XXX
          ((pause while reading))
XXX
XXX
          °(new graph) (.2)
          °increase um (.2)
XXX
          °so (.1) um (.1)
XXX
XXX
          if there increase in the (.) money supply that means
          so your LM curve will shift (.) to the right.
XXX
XXX S1:
          yes.
XXX IS19: and,
XXX
          so you knew, uh
          our income equilibrium will be (.)
XXX
          uh greater than this (.) long run
XXX
33:25
```