May 2020

OfficeHours_IS3_20151012_Seg01.pdf

Participants: IS3 (striped shirt, glasses), S1 (green jacket, grey shirt)

Context: S1 goes to IS3's office hours for help. The background noise level is high.

0:00

xxx S1: a (.) couple of questions on um
xxx um
xxx obviously ((name)) gives us a lot of stuff ((laugh))
xxx u:m (.) but
xxx i have a couple of questions because i um
xxx have been doing (the) practice problems,
xxx u:m i don't know if uh you saw that
xxx she posted them up but
xxx um i've been doing them,
xxx and um (.) uh
xxx like i thought i did it right but in-
xxx i put the answers in the back and
xxx it says in the- in the back that um
xxx (.1) like so for this one (is) number:
xxx twelve,
xxx so then twelve it says
xxx (.2) like that,
xxx ((undecipherable))
xxx IS3: yeah
xxx S1: and i'm like (.) confused
xxx [and same with this one
xxx IS3: [oh:
xxx S1: i did- i did eleven and (.)
xxx she has something else
xxx IS3: u:m so you're wondering the differences?
xxx S1: um
xxx yeah so i'm (.) wondering,
xxx um
xxx like
xxx how come
xxx for (.2)
xxx um
xxx how come (.) like (.1)
xxx like do you want to check my work for twelve to see if it's
xxx right
xxx ((undecipherable))

xxx cause it may be wrong
1:17
xxx ((pause while IS3 checks the work))
1:47
CLF IS3: (the-)↑
CLF is this the answers to this question?
xxx S1: that's- that's what i was asking cause
xxx she said that this was-
xxx these are the answers, but
xxx IS3: i don't think so:
xxx S1: right? like
xxx isn't that confusing
xxx IS3: yeah
xxx °it's really (.) [confusing
xxx S1: [and i- i could show you on my laptop
xxx she posted (.)
xxx [the pretest
xxx IS3: [oh:
xxx S1: yeah this is
xxx i don't know if you saw it but this is called
xxx [uh pretest a um
xxx IS3: [oh:
xxx S1: yeah=
xxx IS3: =i didn't notice this=
xxx S1: =oh okay
xxx she put up pretest a and then she put up the solutions,
xxx IS3: yeah
xxx S1: (and)
xxx IS3: but i check the answers (for it)
xxx S1: yeah
xxx and does it seem right?
xxx i know it's (.)
xxx like (.) hard to read but
xxx that's a b c and d ((pointing))
2:30
xxx ((pause while IS3 checks))
2:44
xxx IS3: the f- the first one is right and (.2)
xxx the second one
xxx ((pause))
xxx ((undecipherable)) this one is right
xxx S1: [okay
xxx IS3: [(the- this)
3:00
xxx uh:

xxx you- the formula you use here
xxx you use just like multipl-multiplication,
xxx S1: mhm
xxx IS3: um the-
xxx the thing you need to make sure before using this is
xxx these two ((undecipherable)) independent right?
xxx S1: mhm
xxx IS3: (and uh) actually,
xxx (.3) did you check this (independent right now?)
xxx ((undecipherable)) it's not independent
xxx cause
xxx S1: um she just-
xxx she gave us uh (.)
xxx this this (this that and then)
xxx IS3: cause um
xxx i check (with) this like uh
xxx if- (.1)
xxx if a and b are (.1) independent, it-
xxx it should follows this formula right?
xxx S1: yeah
xxx IS3: but actually you can see from here,
xxx they are not independent.
xxx S1: ((nods))
xxx IS3: right?
xxx S1: right
xxx IS3: so you can't use this formula
xxx S1: ((nods)) (mhm)
xxx and you only use it for when it's [independent okay
xxx IS3: [independent yeah
xxx S1: got it
xxx IS3: (you sure?)
xxx S1: got it
xxx alright
xxx IS3: so:
xxx (uh)
xxx this problem,
xxx uh:=
xxx S1: =and- and where did you see that it's not independent?
xxx IS3: because um
xxx you can check from here
xxx uh p- this is (p and b) right
xxx S1: mhm
xxx IS3: this (.) point (.) one
xxx ((undecipherable))
xxx S1: mhm

xxx ((laugh))
xxx IS3: this point (.) thirty five↑
xxx S1: ((nods))
xxx IS3: this is point (.) (twenty) five
xxx you can (multiply) ((undecipherable))
xxx (this number's four right)
xxx S1: m::
xxx okay okay got it
xxx IS3: ((nods))
xxx so
xxx it's not independent
xxx a:nd um
xxx if a and b are not inde-independent you can check that
xxx a bar and b bar is ((undecipherable)) (independent is it?)
xxx S1: mhm
xxx okay cool
INT IS3: do you know how this ((gestures))
INT ((pause))
INT d- know-
xxx do you know how to- how to get this↑ one?
xxx S1: no
xxx IS3: okay
xxx you can- let me check that
xxx cause (.) u:m
xxx what we need to check is
xxx whether these two are:↓
xxx equal right
xxx S1: mhm
xxx IS3: like uh:
xxx ((pause to write))
xxx [these two are equal right?
xxx S1: [okay
xxx mhm
xxx IS3: and uh:
xxx ((pause))
xxx ((mumbles to self))
xxx this can be (writ-written as)
xxx one (.) minus (.1)
xxx (and one) minus (.1)
xxx this right?
xxx S1: mhm
xxx IS3: and this could be ((undecipherable, too quiet))
xxx this right?
xxx S1: mhm
xxx IS3: and uh:

xxx we can use the formula here,
6:01
xxx one minus this
xxx S1: ((nods))
xxx IS3: is one minus (.1)
xxx p a minus p b plus (.1)
xxx this (right?)
xxx and you just
xxx make it one by one
xxx minus (p a) minus (p b)
xxx plus ((undecipherable))
xxx S1: ((nods))
xxx IS3: uh: this part are the same↑
xxx but we already know that this part is not the same.
xxx S1: ((nods))
xxx IS3: so (.) ((undecipherable))
xxx S1: okay and so um (.2)
xxx wh- what is-
xxx does that mean not?
xxx IS3: yeah
xxx S1: okay
xxx and then um
xxx ((pause))
xxx i think i got (.) confused
xxx IS3: yeah
xxx this- this formula is the formula you use here,
xxx S1: mhm
xxx okay
xxx IS3: just one minus this
xxx S1: mhm
xxx IS3: uh
xxx (the other) is here
xxx S1: ((nods))
xxx IS3: it is one minus (.)
xxx p a: plus p b:
xxx minus p a and b
xxx you just (.)
xxx take it out↑
xxx (and left with this)
xxx ((pause))
xxx S1: okay↑
xxx u:m
xxx ((pause))
xxx yeah
xxx yeah i think i get it

xxx ((both nod))
xxx IS3: so: they are not independent
xxx S1: mhm
xxx IS3: so we can't use the- this formula for here
xxx S1: mhm
xxx IS3: u:m
xxx i guess
xxx uh:
xxx so
xxx uh:
xxx so we still use this formula cause this formula always
xxx (helps)
xxx S1: mhm
xxx IS3: um
xxx like uh
xxx we want to (.)
xxx check (.)
xxx uh
xxx oh th-this one
xxx this one
xxx we want to check- °oops i messed up
xxx S1: that's okay
xxx IS3: we want to check this one right?
xxx S1: ((nods))
xxx IS3: uh actually
xxx we have this formula
xxx (.3) ((undecipherable)) plus (b) equals
xxx this. right?
xxx S1: mhm
xxx IS3: uh:
xxx this (formula)
xxx is (.3)
xxx this right
xxx S1: ((nods)) yeah
xxx IS3: so
xxx you can
xxx just one minus this?
xxx S1: ((nods))
xxx uh yeah
xxx right?
xxx IS3: and (.) you got these two right
xxx S1: (.2.) uh yeah i just have to do [one minus that and that=
xxx IS3: [yeah:
xxx =yeah:
xxx so you got this

xxx S1: (.1) yeah
xxx IS3: uh so
xxx S1: so it’s almost like i have to do-
8:59
xxx i have to use this formula,
xxx [but i have to do
xxx IS3: [yeah
xxx S1: one minus that one minus that one minus that,=
xxx IS3: =yeah:
xxx S1: £and then-
xxx £[okay and then plug it in
xxx IS3: [use the formula
xxx S1: £okay
xxx IS3: ((nods))
xxx S1: got it=
xxx IS3: =a::nd uh:
xxx (yeah) this is right,
xxx a:nd uh:
xxx yeah this is right
xxx S1: oh
xxx thank you
xxx yeah so i’m gonna (.)
xxx star that
xxx cause that one i got (right)
xxx IS3: (yeah)
xxx S1: and the:n (.1)
xxx so do you think you can explain eleven to me
xxx [cause ((undecipherable))
xxx IS3: [oh okay
xxx S1: i’m sorry there’s so many- so much=
xxx IS3: =no no no no
xxx S1: writing on it
xxx IS3: ((undecipherable, reading the problem to herself))
xxx yeah uh:
xxx a is right- correct actually
CLF a- do you have (answers) of this?
CLF S1: um (.1)
CLF that’s uh:
CLF [why i’m
xxx IS3: [oh:: okay
xxx S1: yeah i- i a- i like went to check in the back and it’s
xxx IS3: yeah
xxx S1: yeah it’s not there
xxx maybe like i can look in my laptop again
xxx IS3: uh:

xxx S1: but i- yeah
xxx IS3: no problem=
xxx S1: =no? okay
xxx IS3: uh
xxx the definition of independence is using this formula
xxx right?
xxx S1: right.
xxx IS3: u:m
xxx so when you check whether two events are independent
xxx (uh) you can use this formula
xxx we already know they are mutually exclusive so:
xxx which means
xxx this- they happen-
xxx (the- the probability) they happen together so
xxx cause (.) they can’t happen at the same time
xxx S1: mhm
xxx IS3: so the probability it (.) happen together is zero.
xxx S1: okay
xxx IS3: so:
xxx S1: that- yeah that you just have to know right?
xxx IS3: yeah=
xxx S1: =okay
xxx IS3: so:
xxx u:m
xxx you- u:m
xxx you want to make sure-
xxx you want to check whether these two are equal
xxx if this zero equals one of them must be zero right
xxx S1: mhm
xxx IS3: but we don’t know-
xxx we don’t know whether (zero) or not
xxx S1: mhm
xxx IS3: (.2) uh most of the time
xxx it’s not zero cause
xxx a happens
xxx S1: ((nods))
xxx okay
xxx IS3: right
xxx S1: yeah it’s (.) like a: give:n b right?
xxx IS3: uh:
xxx S1: or-
xxx IS3: just- just two simple events
xxx (um)
xxx (but they)
xxx most of the time

xxx they happen (so the) probability is not zero,
xxx S1: m:
xxx IS3: it’s more than zero
xxx S1: okay
xxx IS3: uh:
xxx so:
xxx (.2)
xxx so:
xxx they are not=
xxx S1: =mhm=
xxx IS3: =equal
xxx if they are not equal,
xxx zero ((undecipherable))
xxx S1: okay
xxx and the- and you said they’re (.)
xxx independent or de-dependent
xxx IS3: dependent
xxx S1: okay okay got it
xxx ((pause))
xxx IS3: a:nd the
xxx ((undecipherable))
11:59
xxx oh you- you need to make sure that (disjoint),
xxx is not the same thing as independent.
xxx S1: okay
xxx IS3: actually
xxx when two things are (.) disjoint
xxx they: most of the time they are dependent
xxx S1: oh
xxx IS3: because of this
xxx cause (.2)
xxx this (.)
xxx uh: (.2)
xxx i mean if two things both ha- probability of them
xxx ((undecipherable))
xxx the (.) multiple of their-
xxx (.) the multiple of these two values is not equal to zero.
xxx so
xxx this formula- this formula
xxx doesn’t (hold)
xxx S1: mhm
xxx IS3: so they’re independent
xxx S1: ((nods))
xxx IS3: and uh:
xxx for this,

xxx uh:
xxx ((pause))
xxx y- this is the same thing of independance right?
xxx S1: mhm
xxx IS3: if a and b are independent, this formula holds
xxx but, it is talking about disjoint a lot
xxx uh p: a: (.1)
xxx is equal to (.1)
xxx °(p) (.1)
xxx °plus
xxx this- this right?
xxx S1: ((nods))
xxx IS3: um
xxx this ((undecipherable)) zero
xxx so this is zero
xxx S1: ((nods))
xxx IS3: but we are not sure whether p a is zero or not
xxx S1: mhm
xxx okay
xxx and u:m
xxx this whole thing is zero right?
xxx IS3: yeah
xxx S1: oh okay
xxx alright
xxx IS3: cause this one is zero
xxx S1: right
xxx okay
xxx IS3: so:
xxx is it okay?
xxx (what's this?)
xxx S1: u:m
xxx s- and then
xxx for (.) [d
xxx IS3: [for this one
xxx ah absolutely we- [we don't know anything about this=
xxx S1: [yeah
xxx =right right=
xxx IS3: =yeah
xxx S1: okay and um,
xxx (.1) so
xxx °okay so it's not <u>that</u> one
xxx (then)
xxx IS3: yeah
xxx S1: °it's <u>that</u> one?
xxx ((pause))

xxx ((mouths okay))
xxx oh- uh:
xxx £that's an (a) ((laughs))
xxx there we go
xxx alright u:m
xxx ((pause))
xxx so:
xxx so (.)
xxx should i just- (.1)
xxx should i just remember that mutually exclusive (.)
xxx it's always gonna be dependent because u:m
xxx (.1) because
xxx um
xxx they can't (.) happen (.) at the (.) same time?
xxx IS3: yeah
xxx S1: okay
xxx and (.)
xxx independent,
xxx can happen at the same time
xxx u:m
xxx (.3) but
xxx uh if it was like that
xxx like the venn diagram,
xxx IS3: oh: you want to (.) explain this way
xxx S1: ((laughs))
xxx IS3: actually uh:
14:59
xxx this can tell you (whether they're) disjoint
xxx but (.) when you're talking about uh independence
xxx (.) it's like uh
xxx there are two events here
xxx S1: m
xxx IS3: if you- if today is (raining,)
xxx the probability that today's going to be raining,
xxx or if you- (.) whether you will miss a bus
xxx they're two (.) independences right
xxx S1: right
xxx IS3: you can't draw this ((undecipherable)) one (.)
xxx (such sample space)
xxx S1: right
xxx IS3: unless you: (.)
xxx put a (sample) space together,
xxx so:
xxx S1: so- so this- this can be independent and dependent right?
xxx like it could be either or?

xxx IS3: (.1) yeah
xxx S1: yeah okay
xxx but
xxx IS3: the only thing you need to check is this one
xxx S1: right
xxx but
xxx um
xxx this is always gonna be dependent.
xxx right?
xxx IS3: yeah
xxx S1: okay=
xxx IS3: =i think so
xxx S1: yeah
xxx okay
xxx never independent
xxx IS3: um
xxx uh:
xxx unless (.)
xxx one thing uh- one event’s proba-probability is zero.
xxx S1: mhm
xxx IS3: so (.) this is ((undecipherable))
xxx S1: okay
xxx [i-
xxx IS3: [if one of them is zero
xxx [((undecipherable))
xxx S1: [yeah
xxx i think the only thing (.) i-
xxx (.1) i don’t a hundred percent get is like
xxx um
xxx just
xxx the dependent part like-
xxx like explaining it in like the formula way?
xxx instead of this way
xxx um
xxx and then in the independent part um
xxx uh
xxx in the formula (.) way. um
CLF IS3: this is (in the)-
CLF if this is a, this is b,
CLF this is (a)
xxx S1: mhm
xxx ((pause))
CLF IS3: uh:
CLF cause it’s using <multiplication>
CLF like- i think it can’t (be sure) in (.) here

xxx S1: mhm
CLF IS3: just need to check the probability
CLF is equal to this
CLF multiply this or not.
xxx S1: okay
xxx um
xxx but
xxx uh i'm sorry but d- do you think uh you can explain to me uh
xxx one more time like
xxx using the formulas again um
xxx [why
xxx IS3: [on the first one?
xxx S1: yeah why it's [n- not dependent and why it
xxx IS3: [oh sure
xxx S1: why it is dependent and why it's not (.) independent.
xxx IS3: okay
xxx uh:=
xxx S1: =thank you
xxx IS3: ((laugh)) you're welcome
xxx we know that uh
xxx a and b are mutually exclusive,
xxx so:
xxx this is a (narrow) space right?
xxx S1: mhm
xxx IS3: so, (.2)
xxx this is th- cause it can't happen together
xxx S1: mhm
xxx IS3: so the probability that (they) happen together is zero.
xxx S1: mhm
xxx IS3: and uh
xxx this is p a multiply p b
xxx so
xxx if you say like this,
xxx you may say:
xxx probability of this one is one over three,
18:01
xxx (so) this is one over two,
xxx S1: mhm
xxx IS3: you can say they're both not equal to zero right so the (.)
xxx multiplication w- can't be zero
xxx S1: right
xxx IS3: if they can't be zero so these two must not equal
xxx because this one is zero this is not equal=
xxx S1: =right

xxx IS3: so this is- (.)
xxx must not be zero.
xxx S1: right
xxx IS3: not- not be equal
xxx S1: yeah=
xxx IS3: =so this one (.) doesn't hold
xxx S1: (.1) yeah and that means uh dependent=
xxx IS3: =independence=
xxx S1: =in-independent okay okay
xxx IS3: independence (.) is-
xxx is that ((undecipherable))
xxx S1: °okay
xxx °i'm gonna- i'm gonna star that
xxx IS3: yeah
xxx S1: (.1) okay
xxx and the:n for dependent?
xxx IS3: if it's not independent,
xxx it's dependent.
xxx S1: oh right yeah ((laughs))
xxx okay ((laughs))
xxx alright so:
xxx and then you said disjoint, (.1)
xxx IS3: disjoint means this
xxx (.3)
xxx S1: they- they mean this-
xxx IS3: they can happen at the same time
xxx S1: ((nods))
xxx yeah
xxx [but-
xxx IS3: [this is asking the probability they happen together
xxx at- they happen at the same time
xxx S1: mhm
xxx IS3: they tell you they can't happen at the same time
xxx so the probability happen at the same time is zero.
xxx S1: okay
xxx u:m
xxx (.1) so
xxx (.2) so that means that uh disjoint and independent
xxx IS3: it's not the same thing=
xxx S1: =yeah
xxx yeah it's not
xxx ((laughs))
xxx okay
xxx cause that means
xxx can't happen at the same time and independent means

xxx um (.) that they’re just not equal.
xxx [and
xxx IS3: [yeah
xxx S1: okay
xxx and it- that’s the only difference between the two right?
xxx between [<disjoint> and independent?
xxx IS3: [hm:
xxx ((nodding)) i th- uh
xxx ((pause))
xxx i think so
xxx S1: okay
xxx IS3: (.1) if you remember this it’s enough for the exam
xxx S1: okay ((laughs))
xxx got it.
xxx yeah i- i understand now.
xxx (.2) and so i could just remember that
xxx mutually exclusive is (.) always gonna be dependent?
xxx IS3: ((nods))
xxx S1: okay
xxx u::m
xxx how long are you here until again?
CLF IS3: (.1) teaching a class?
xxx S1: uh well no how long (.)
xxx uh are you here in the=
xxx IS3: =office hour?
xxx S1: yeah
xxx IS3: three to five
xxx S1: oh okay
xxx and (.) i don’t wanna:
xxx take up (.) a lot of your time so
xxx IS3: oh↑ no problem
xxx S1: um
xxx i don’t know what time it is though so
xxx IS3: m no problem
xxx S1: u:m (.1)
xxx so the:n
xxx ((pause))
xxx u:m
xxx (.2) can i do: this one with you then?
xxx IS3: o↑kay↓
xxx S1: (okay)
xxx IS3: you mean number seven?
xxx S1: mhm
20:59

xxx IS3: °uh: (classify) according to ((undecipherable, reading to
xxx herself))
xxx find
xxx oh for- for such problems
xxx you just need to count the numbers.
xxx S1: right
xxx IS3: ((undecipherable))
xxx if-?
xxx where's-?
xxx oh (freshman year)
xxx if y-y- uh
xxx only thing you can do is count the number.
xxx S1: mhm
xxx IS3: like
xxx you can count the total number of freshman,
xxx which is uh eighteen- i can write right here?
xxx S1: oh yeah yeah
xxx IS3: ((undecipherable))
xxx eighteen right?
xxx S1: mhm (.1)
xxx IS3: this plus this plus this
xxx °is eighteen
xxx S1: i- i'll tell you what to do next that way (.)
xxx [you tell me if i'm wrong or not okay
xxx IS3: [yeah yeah sure okay
xxx S1: so the:n u:m
xxx ((undecipherable, mumbling to herself))
xxx forty two?
xxx ((pause))
xxx and the:n
xxx °twenty six twenty seven twenty eight twenty nine thirty
xxx °thirty two,
xxx and the:n
xxx °twenty two (twenty three twenty four twenty five twenty
six
xxx °twenty seven) twenty eight,
xxx IS3: yeah
xxx S1: okay.
xxx and the:n
xxx okay i'm gonna do a first,
22:23
xxx ((pause))
22:42
xxx u:m
xxx ((pause))

xxx okay °so ((undecipherable)) f
xxx ((pause))
xxx so f is
xxx ((pause))
xxx so would this one be:
xxx (.1) eight over eighteen?
xxx IS3: uh:: no. [you-
xxx S1: [oh
xxx IS3: you need to-
xxx ((pause))
xxx you need to know what's the:
xxx hm
xxx uh:
xxx ((undecipherable))?
xxx S1: mhm
xxx right so it'd be like
xxx um
xxx ((pause))
xxx IS3: oh no you can't [use this formula (to write)
xxx S1: [oh
xxx oh no?
xxx IS3: remember
xxx (it-) you should make sure that (independent)=
xxx S1: =right right
xxx yeah
xxx okay
xxx IS3: you just-
xxx for this uh this sort of problem
xxx they give you the numbers
xxx you just need to count the numbers (that's okay)
xxx S1: okay.
xxx IS3: the- the:
xxx uh:
xxx (.1) i'm not sure,
xxx uh there are two number-
23:59
xxx two numbers here and here
xxx what's (the) name?
xxx which- which one is denominator?
xxx S1: ((points)) [denominator.
xxx IS3: [(°this one?)
xxx [thank you
xxx S1: [mhm
xxx no [no problem
xxx IS3: [so- so what's this one?

xxx S1: n:umerator.
xxx IS3: numerator (right)
xxx so (.) you're numerator is eight
xxx that's correct
xxx S1: mhm
xxx IS3: but uh:
xxx you need to make sure the denominator
xxx S1: i:s eighteen right?
xxx IS3: no
xxx S1: no
xxx IS3: cause
xxx the (sample space) here,
xxx is all of the students
xxx S1: ((nods))
xxx IS3: all of the students here.
xxx so: what's the total number of (our) students
xxx S1: twenty eight
xxx ((pause))
xxx (oh wrong?)
xxx £oh yeah one twenty n- sorry ((laugh))
xxx IS3: ((laughs)) yeah so:
xxx if- if the:
xxx uh:
xxx if they ask to to de- the denominator is eighteen,
xxx the:- it tell-
xxx it must tell you that (.1)
xxx (the) probability (uh) given that he is a freshman
xxx S1: okay
xxx IS3: if s- they didn't say anything
xxx the- so the denominator will be the whole (sample space)
xxx S1: mhm
xxx okay
xxx so: u:m
xxx ((pause))
xxx so um i'm sorry d- [do you mind uh showing me?
xxx IS3: [yeah (.) sure
xxx S1: thank you
xxx IS3: uh: the number of (.) this
xxx uh (.2)
xxx if i (.) use this to: refer to the whole sample space
xxx (.1) i mean
xxx one twenty [students,
xxx S1: [the- the students [yeah
xxx IS3: [yeah: yeah yeah
xxx (.1) and you just need to get the number or you-

xxx you understand this
xxx S1: yeah?
xxx yeah. and then i just put-
xxx IS3: this one
xxx this one is f and p happens together,
xxx S1: °mhm
xxx IS3: (see it?)
xxx S1: ((nod))
xxx IS3: (it holds (.) one two three) and just-
xxx S1: that's it
xxx IS3: yeah:=
xxx S1: =okay. okay.
xxx °um
xxx (.2) okay
xxx got it
xxx °and then for b,
26:08
xxx ((pause to write))
26:39
xxx °(yeah) ((undecipherable mumble))
xxx IS3: hm:
xxx this
xxx (if) or↑
xxx S1: oh oh yeah
xxx so::
xxx ((pause))
xxx IS3: it means (.) f happens or (.2)
xxx S1: ((nods))
xxx IS3: r happens.
xxx S1: (°mhm)
27:00
xxx IS3: °so (.) um
xxx only if-
xxx on-
xxx you only need one of them
xxx to happen
xxx (that's okay)
xxx S1: ((nods))
xxx IS3: so you can-
xxx you can say
xxx (okay so) for here,
xxx like uh:
xxx this is (.) r happens (.) ((undecipherable))
xxx S1: °mhm
xxx IS3: this is (.) f happens ((undecipherable))

xxx S1: °mhm
CLF IS3: so
CLF ((undecipherable))
CLF (if these are) together
CLF that's okay
CLF ((pause))
CLF one of them happens,
CLF that's okay.
xxx S1: mhm
xxx (.2) sorry could you repeat that
xxx IS3: yeah
xxx S1: thank you
xxx IS3: hm:
xxx wh- when we see f or r happens
xxx S1: mhm=
xxx IS3: =means uh:
xxx we don't need both of them to happen
xxx S1: mhm
xxx IS3: here,
xxx we (.) use this number because
xxx it's-
xxx it's (the on-)
xxx it's the number of they both happen
xxx S1: mhm
xxx IS3: and (.) for here we just need one of them to happen
xxx this (.1)
xxx place (.1)
xxx refers to (.) r happens
xxx S1: mhm=
xxx IS3: =the number of r happens
xxx in different places.
xxx in the freshman or sophomore or something
xxx (.1) this is the place of where f happens
xxx (.2) i mean uh:
xxx these are numbers of freshman u:m
xxx taking course or (.) (rootbeer) and this one
xxx just add this together,
xxx is what f or r happens
xxx S1: so you can (.)
xxx really just like add them=
xxx IS3: =yeah
xxx S1: (and-) okay
xxx alright
xxx IS3: just (.) add the- this one this one this one this one this
xxx one this one

xxx S1: and that'll be my: answer?
xxx IS3: oh you need to
xxx [(divide it) by denominator.
xxx S1: [oh.
xxx IS3: you need to divide it by (.) one twenty.
xxx cause you're calculating probability
xxx S1: right
xxx right
xxx okay
xxx °okay
xxx ((pause))
xxx °um
xxx ((pause))
29:12
xxx ((pause to write))
29:23
xxx IS3: yeah
xxx S1: okay
xxx and then:
xxx c
29:29
xxx ((pause))
29:42
xxx oh
xxx °(that's not right) ((laugh))
xxx (.3)
xxx IS3: (this is a traditional) probability problem,
xxx (.3)
xxx can you remember the (.) formula of (.)
xxx (yeah)?
xxx S1: ((laughs))
29:59
xxx ((pause))
xxx IS3: yeah the probability form- (.) mhm.
xxx ((pause))
xxx (what is) ((undecipherable))?
xxx oh: [((undecipherable))
xxx S1: [uh- uh:
xxx IS3: oh sophomore
xxx S1: mhm
xxx IS3: oh:
xxx S1: ((laughs))
xxx um
xxx ((pause))
xxx ((undecipherable mumble))

xxx IS3: (.2) yeah
xxx S1: °mhm
xxx IS3: it is
30:29
xxx ((pause))
30:48
xxx IS3: m
XXX S1: ((nods))
xxx IS3: (.2) yeah that's it
xxx S1: okay↑ ((laughs))
30:53
xxx ((pause))
31:04
xx IS3: (c) or r
xxx uh: yeah
31:09
xxx ((pause))
31:35
xxx S1: ((laugh))
xxx IS3: ((laugh you- you can write it down first and (.)
xxx then figure it out (like that)
xxx S1: £oh okay
xxx u:m
xxx i w- i mean um
xxx i was just gonna put (.)
xxx s o and (.)
xxx c u uh- c: union (.) r,
xxx IS3: ((nods))
xxx S1: and then over:
xxx [c union
xxx IS3: [c u r
xxx S1: okay okay
xxx °(got it)
31:58
xxx ((pause))
32:11
xxx IS3: yeah this one ((undecipherable))
xxx S1: hm?
xxx IS3: there is a p here,
xxx S1: oh- yeah
xxx IS3: hm
xxx ((pause))
xxx so::
xxx for this,
xxx uh

xxx ((pause))
xxx °c: (and) r
xxx °hm? where's c?
xxx uh:
xxx oh c's here r is here right?
xxx S1: ((nods))
32:41
xxx ((pause))
32:53
xxx IS3: so do you know how to do this one
xxx S1: so
xxx um
xxx (.2) well
32:59
xxx you can just do:
xxx (.3) can't you (.) add them- these two up?
xxx [right?
xxx IS3: [uh:
xxx m:-
xxx you don't need to do so (.) first cause you need to
xxx give (an) intersection of this,
xxx S1: ((nods))
xxx IS3: if you just count and you- you don't know how to do the
xxx (last one)
xxx S1: ((nods))
xxx IS3: okay
xxx then um
xxx oh when you count numbers you need to figure out
xxx what part↑ of them you need to count.
xxx S1: mhm=
xxx IS3: =so you need to figure out what this refers to
xxx S1: ((nods))
xxx IS3: (.2) l:ike uh:
xxx c (.1) or r
xxx (.1) oh there is a formula dealing with this problem
xxx S1: ((nods))
xxx IS3: you remember?
xxx .hhh uh ((undecipherable))
xxx right
xxx S1: (.2) right u:m
xxx can you show me that?
xxx IS3: sure
xxx S1: thank you
xxx IS3: so this
xxx ((pause to write))

xxx S1: ((nods))
xxx IS3: ((laughs))
xxx m- you- you can also think of it this way
xxx this part is <c:: or r>
xxx (.2) then (you do) happen with
xxx ((undecipherable)) at the same time,
xxx so:
xxx it will be this one or this one
xxx [right
xxx S1: [mhm
xxx IS3: just plus this one and this one
xxx S1: ((nods))
xxx IS3: that's okay
xxx S1: okay
xxx u:m
xxx IS3: (.2) actually this one is here (.)
xxx this one is here.
xxx ((pause))
xxx it's like uh
xxx °uh this is ((undecipherable)) and this is
xxx ((undecipherable)) and this is sophomore,
xxx and (.) we need to count the (.) areas (they) intercept,
xxx S1: ((nods))
xxx IS3: it will be this place and this place
xxx S1: ((nods))
xxx ((pause))
xxx °okay
xxx u:m
xxx ((pause))
xxx so (.2)
xxx um
xxx sorry do you mind (.) um [((undecipherable))
xxx IS3: [su:re
xxx um you mean this formula?
xxx S1: um (.) like (.) plugging in the numbers for- [for this
xxx IS3: [oh!: sure.
xxx °here i got,
xxx °m:
xxx °((undecipherable))
xxx °uh:
xxx °and to count the number
xxx actually,
xxx °count the numbers okay
xxx this o:ne is uh sixteen,
36:02

xxx and then this one is twenty
xxx °uh:
xxx (.1) and the number here is, (.)
xxx oh just add this up.
xxx (.3) uh:↑
xxx (.3) ((undecipherable mumbling))
xxx u:m (forty) two:
xxx (forty) eight
xxx fifty?
xxx fifty right?
xxx this is fifty
xxx (.1) and this is uh ten thir- thirty four↑
xxx right?
xxx °this is fifty and this (thirty four)
xxx °((undecipherable))
xxx yes
xxx °((undecipherable))
xxx S1: ((nods))
xxx IS3: °u:m
xxx i: think i need to go=
xxx S1: =okay=
xxx IS3: =for my next class,
xxx S1: okay yeah yeah
xxx IS3: do you mind coming wednesday?
xxx S1: yeah i can come- uh wednesday. [((undecipherable))
xxx IS3: [or
xxx S1: i <u>think</u> i can
xxx what- what time
xxx IS3: four to five
xxx S1: °four to five
xxx i: m:ay °be able to
xxx i'm not (.) sure i'm- i- (.2)
xxx u:m cause i have class,
xxx [(like)
xxx IS3: [oh::
xxx S1: but
xxx u:m
xxx IS3: m:
xxx ((pause))
xxx S1: but i- i could try i th- like- ma- maybe i could.
xxx but i'm not sure
xxx cause i have like a class like (.) um (.2)
xxx uh that starts like at five and it's like in the hospital so
xxx i gotta (.) [walk all the way there

xxx IS3: [oh okay
xxx S1: [yeah yeah
xxx IS3: [okay
xxx S1: u:m
xxx but
xxx but no like i- i understood (.) a lot of this so
xxx thank you
xxx [thank you so much for all your help
xxx IS3: [(oh no problem)
xxx S1: thank you
xxx ((laugh))
INT IS3: °my- my office hour is on monday and wednesday
xxx S1: your- your-
xxx IS3: office hour
xxx S1: oh okay thank you and do you mind if i keep that=
xxx IS3: =yeah! sure=
xxx S1: =okay. thank you
xxx no no it's okay. thank you

-
-