May 2020

OfficeHours_IS31_20160405_Seg04.pdf

Setting: Loudness ranges from mild to loud classroom
Participants: S1 (gray hat, male)IS31 (lakers sweater, male) S2 (gray sweater) S3 (maroon sweater, female)

0:00
XXX S1: ((starts a bit cut off))
XXX cause he have a extra one four.
XXX I was like
XXX where did he get the four from?
XXX IS31: hm?
XXX S1: you have a like th- the
XXX the thirtieth per- a- percentile?
XXX uh you get like uh negative zero point five two four.
XXX IS31: ah: ok [so you mean from-
XXX S1: [I was like
XXX [where did he get four from?
XXX IS31: [so: y-you mea:n
XXX yea from the table you can just (.) get
XXX two digits.°
XXX right?°
XXX S1: yea I just get [((unclear))
XXX IS31: [bu:t
XXX yea
XXX then tha- that doesn't matter .
XXX [maybe it was uh
XXX S1: [cause
XXX however um (.)
XXX I have it a question is here
XXX ((shuffles notes to find it))
XXX here ((points to notes))
XXX you see?
XXX like how- like thirtieth percentile (is very difficult)
XXX like eighty-five then fifty then fifteen
XXX so do I (take it) as the least↑ number of it?
XXX IS31: [hm:
XXX [or (.) just like any number I pick
XXX IS31: a- actually that doesn't matter.
XXX S1: it [doesn't matter?
XXX IS31: [tha- that's just
XXX yea [just uh
XXX S1: [cause here we this (.) uh zero
XXX then we- I just get the only one
XXX this one ((points at notes))

XXX like one number (.2)
XXX IS31: m:: ((thinking))
XXX S1: three zero eight- uh
XXX eight one
XXX if I go to that uh thirtieth percentile,
XXX IS31: [m::
XXX S1: [like the first one I got like (three point eight)
XXX IS31: (let's say) you- you better find the most uh:
XXX S1: least number
XXX ok
XXX IS31: yea m- most uh (.) I mean
XXX nearest (.) number.°
XXX S1: got you
XXX IS31: but actually that doesn't (make) a lot
XXX but
XXX but if- if you can use (.) like computer↑
XXX to do (.) calculation
XXX you can ((unclear)) accurate number.=
XXX S1: =yea
XXX in that- in- in- in the exam you know you're like
XXX ((motions a lot of writing))
XXX >go blind in you like you have to look for it all over<
XXX ((IS31 nodding))
XXX >and you're just like hurting your time<
XXX ((pause)) ((sudden end in conversation))
XXX let's see°
XXX ((a few moments later S2 enters the conversation))
XXX S2: is this correct? ((IS31 leans over towards S2))
XXX so: I got answer↓ (.) part a like this
XXX IS31: yes
XXX and (.) I think (.) if you (.) need to do (.) this
XXX integration,°
XXX it better is plan this (.) (in the)
XXX like (,) uh
XXX like
XXX like ((draws in the air))
XXX (monomial) form.
XXX and like this-
XXX in this case°
XXX ((unclear but is solving problem on paper))
XXX like this
XXX n- no:
XXX uh: for example, (.)
XXX this one. ((pointing @paper))
XXX one minus x squared.

XXX can you: (.1)
XXX do you know how to expand it into (.) some multiple, (.1)
XXX form.
XXX S2: like this?° ((writing it down))
XXX IS31: yea
XXX and th- the (.)
XXX S2: no but this is wrong ((crosses out what she wrote))
XXX IS31: yea that's right
XXX one: minus x multiple by one minus° ((unclear))
XXX S2: m:
XXX IS31: and then you can do↓ (.) next step.
XXX how to
XXX S2: ((looks confused))
XXX IS31: ((unclear)) you can write it as one minus two x plus=°
XXX S2: =ah:
XXX IS31: yea
XXX S2: ok
XXX IS31: yea yea
XXX because this: form it's easy to: (.)
XXX S2: inte[grate
XXX IS31: [integration ((nods))
XXX yea
XXX ((pause as S2 finishes the problem))
XXX and then (.) ((points @notes))
3:00
XXX this case you just need to multiply it by another x°
XXX S2: ah: ((erases what she wrote))
XXX ((pause))
XXX S1: why did I get the wrong answer? ((IS31 does not hear))
XXX S1: why did I get the wrong answer?
XXX IS31: hm?
XXX S1: yea for four five zero one?° (.)
XXX I get this
XXX ((points @notes))
XXX cause ok
XXX I wanna try something really quick,
XXX I'm gonna try it first ((starts typing on calculator))
XXX (we add eight here) (.) one two zero↓ multiply (.1) nega-
XXX (.)
XXX negative point↑ (.) five two four,(.1)
XXX equal (.) this, (.) plus five thirteen
XXX ((typing)) five thirteen,
XXX IS31: it seem (.) seems correct
XXX not correct?
XXX S1: you have it

XXX yea you have it five point- yea
XXX one two
XXX yea
XXX you can check ((hands IS31 calculator))
XXX yea
XXX cause I- I'm right ((unclear)) decimal number
XXX S1: and then I took only [one decimal number
XXX IS31: [ah yea
XXX S1: that's why I have it [bigger than that
XXX IS31: [ah yea yea
XXX ((laughs))
XXX th- tha- that that's ok°
XXX ((S2 talks to catch IS31's attention))
XXX S2: even though I integrate? ((lines paper))
XXX IS31: hm:
XXX let me see°
XXX ((pause as he reads paper))
XXX hm::
XXX ((pause))
XXX oh ok°
XXX uh: first, (.)
XXX the (.) two multiple by: x square
XXX the integration should be:
XXX S2: oh:
XXX IS31: should be two over three (.) right?°
XXX ther- there should be an integration two over three°
XXX before°=
XXX S2: =ah yea ((erases))
XXX IS31: and there is a (.) twelve (.1) b- before (.)
XXX over this (.) ((pointing @paper))
XXX because there is°-
XXX S2: oh: yea
XXX IS31: you can (multiple) all the parts by twelve
XXX S2: plus ((writes plus sign on paper)) ((unclear))
XXX IS31: yea yea you (can write that)°
XXX S2: but if you (.) uh plug in here, ((writing))
XXX ((S3 walks over between IS31 and S2))
XXX ((observes closely))
XXX IS31: ok
XXX uh: for this case (.1)
XXX because I have seen that x is greater than zero.
XXX right?
XXX ((S2 gets scared by S3))
XXX so (.) ((writes on S2's paper))
XXX the integration should be zero to x

XXX S2: m::=
XXX IS31: =not- yea:
XXX uh
XXX the general form is minus infinitive.
XXX but (.1) for some (.) cases
XXX ((S3 suddenly places her notes between IS31 and S2))
XXX if you know the yea (lower form of x)=
XXX S3: =so the
XXX so the p right here, ((looks at paper))
XXX um:
XXX I got this
XXX this is the p that I got
XXX IS31: oh
XXX ok
XXX S3: and then (.) so I just use this formula right here
XXX ((points))
XXX IS31: yes
XXX S3: what so n is a hundred,
XXX IS31: yea
XXX S3: and x is [twenty
XXX IS31: [twenty
XXX yes=
XXX S3: =so (.)
XXX then
XXX I just (.) then it's just gonna get too complicated
XXX cause this is a hundred vectorial over twenty vectorial
XXX ((solving problem))
XXX eighty, (.)
6:00
XXX so that's gonna be
XXX IS31: m:
XXX yea [((unclear))
XXX S3: [two hun-
XXX a [hundred times ninety nine times ninety eight
XXX IS31: [no no th- wh- what does the:-
XXX what does (the solution also) write like this (.1)
XXX or [you can use uh (.) that or something
XXX S3: [I have no idea
XXX I have no idea
XXX ((leaves but quickly comes back as IS31 speaks))
XXX IS31: actually I think you- y- your computer=
XXX S3: =it- it's just too complicated
XXX [like I have to times everything
XXX IS31: [but y- you can-
XXX you can- you can use your calculator to do this.

XXX S3: yea
XXX but I just (.)
XXX I don't think ((unclear))
XXX IS31: uh:
XXX this should be a
XXX uh:
XXX I mean (.) accurate (.) number.
XXX but maybe you can use um
XXX approximation
XXX but (.) so long as you can handle this (.)
XXX using a calculator, (.) ((types in calculator))
XXX it's not (.1)
XXX that bad.°
XXX how to do integral,° ((on the calculator))
XXX S3: I have no idea
XXX IS31: oh this one ((clicks calculator))
XXX oh
XXX you just use:
XXX oh ((chuckles)) it's ok
XXX you can ((inaudible))
XXX ((S3 takes calculator from IS31))
XXX S3: wait how do you do this using calculator?
XXX IS31: ((takes calculator back))
XXX m::
XXX th- this ((unclear)) r (.2)
XXX means (.) the number of (.) from like
XXX (a choose b)
XXX for example
XXX S3: from (n choose r) right?
XXX IS31: yea
XXX for example (from five choose two is (.) ten)
XXX ((both nods))
XXX yea
XXX S3: can you- can you calculate this for me? ((points at
XXX calculator))
XXX so I can know if this is correct
XXX ((pause while IS31 calculates))
XXX IS31: this is
XXX [oh ((realizes calculator belongs to S1))
XXX can I use this?=
XXX S1: =yea no no no it's fine
XXX no worries
XXX S3: [and also (te-test) this
XXX cause I wanna ch- check if I got it right answer.°
XXX ((pause as IS31 checks))

XXX twenty° ((reads question to IS31))
XXX ((IS31 nods))
XXX IS31: thank you,°
XXX S3: one minus° (.1)
XXX two point° (.2)
XXX e°
XXX ((pause as IS31 fills rest of answer))
XXX IS31: is that right?=
XXX S3: =is this right? I don't know ((chuckle))
XXx IS31: I think it should be right
XXX ((pause))((S3 checking notes and calculator))
XXX S3: thank you
XXX (and also°)
XXX IS31: yea
XXX S3: [so I did this
XXX IS31: [you you better take a calculator with you
XXX when take exams
XXX if you need it.°
XXX S3: so I
XXX so this one ((points at question))
XXX so I plug it in
XXX I use um (.) the antiderivative pdf
XXX so I just put this in,
XXX put this in,
XXX ((when she says "this" she points to something different))
XXX and (then antiderivative) number.
XXX IS31: a- are you sure this is correct?
XXX the integration?
XXX ((pause))
XXX S3: yea:
XXX I just (.2)
XXX uh:
XXX actually I don't know
XXX IS31: ok
XXX m:
XXX a better way to do integration is that you:
XXX [you-
XXX S3: [I used the cdf
XXX cause the cdf is just the antiderivative from um: (.)
XXX oh cdf is the antiderivative of- of(.)
XXX IS31: ok
XXX [are you sure that- (.)
XXX S3: [of pdf,=
XXX IS31: =are you sure this cdf is right? (.2)
XXX S3: I think it's right°

XXX IS31: actually I think it's not right. (.2)
XXX ((reading paper))
XXX ok°
XXX a- a better way to (.) do such integration is that you just
XXX i- uh- (expand) this (.)
XXX in a form of (.) the multi (.1) multi,
XXX how to say° ((chuckle))
9:00
XXX uh
XXX like this ((writes on paper))
XXX for example this is one (.)
XXX one ((unclear)) one minus one squared right?°
XXX S3: mhm
XXX IS31: and one minus (.) one square is (.)
XXX one minus two one↑ plus (.) one (.) squared.
XXX ((.3 as S3 reads what IS31 wrote))
XXX S3: [oh:: I did (not)
XXX IS31: [oh you just plan it (.) into this form
XXX S3: because I did the- I did the (u) substitution
XXX IS31: yea I know but I think
XXX um:
XXX this form is not correct (.1)
XXX ((S3 nods))
XXX it's not integration form
XXX S3: ok
XXX thank you
XXX ((walks away))
XXX S2: ((walks by and sets paper in front of IS31))
XXX can you help me write something?
XXX IS31: sure°
XXX S2: for (.) part d,
XXX ((inaudible))
XXX IS31: uh: ((reads paper))
XXX it should be correct
XXX uh:
XXX [except for uh twelve,
XXX S2: [I didn't ((unclear))
XXX IS31: you missed uh
XXX the twelve
XXX S2: ah
XXX ((pause while writes on paper))
XXX IS31: it seems that (it would be) correct°
XXX S2: and I just checked=
XXX IS31: =oh (you can just do) this, (.2)
XXX because as you have calculated the cdf

XXX you can just use cdf to (.) do- (.1)
XXX beca- (.1)
XXX S2: because for part b,
XXX the answer for cdf,
XXX IS31: ah ((S2 circles something))
XXX ah
XXX S2: part b,°
XXX (the:y wrote) answer like
XXX IS31: oh
XXX S2: [zero six
XXX IS31: [I know
XXX so (there room for°)
XXX >yea yea yea<
XXX th- that's a- that's a-
XXX mm:
XXX I mean° complete form.
XXX because (.) you know that (.) this (.) cdf f- this function
XXX is defined on the whole ((unclear))
XXX from minus infinity↓ to infinity.
XXX right?
XXX and uh-
XXX this
XXX this form is all:
XXX only correct↓ when x is within (.) zero and one.
XXX S2: oh:
XXX IS31: and we know that this f x (.) is always (.) increased from
XXX zero to one.
XXX right?
XXX S2: what about-
XXX what does it mean (.) zero in one
XXX IS31: beca- because: (.)
XXX uh:
XXX f x
XXX um (.)
XXX because the:↓ (.) meaning of this cdf is that
XXX the probability that x (.) is less than (.3) (a)°
XXX right?
XXX f (a) in the probability that°
XXX S2: mhm
XXX IS31: a- and uh we know that this x is within (.) zero and one
XXX right?
XXX S2: ((nods))
XXX IS31: so
XXX if a is (.) less than zero.
XXX (let's say) a is minus one

XXX S2: [mhm
XXX [then the probability x is less than (a) is zero
XXX right?
XXX ((S2 nods))
XXX because ((unclear))
XXX so it can't be less than (.) minus one.°
XXX so it's zero. (.1) ((S2 writing notes))
XXX when this a is ((unclear))
XXX S2: ((points @ paper))
XXX so this one is (.) [only:-
XXX IS31: yea ((nods))
XXX S2: x (.) when x is (.) less than zero.
XXX IS31: yea
12:00
XXX that is on the left of it's (.) grid
XXX S2: what about this one
XXX x is (.) bigger than a one?
XXX IS31: yea (.)
XXX because: (.) we know that (all x are between zero and one)
XXX S2: ((nods))
XXX IS31: so if a is (.) bigger than one then all x (.) are (less
XXX than).
XXX so the probability will be one.°
XXX ((both nods))
XXX S1: ((comes in from left))
XXX ok I have a one quick question.
XXX if I don't round it up. (.)
XXX and put the answer
XXX it's gonna be fine↑ or not.
XXX IS31: mm:
XXX S1: cause I get one point five five eight,
XXX and you round it up with a one point five six.
XXX IS31: it should be right. ((nods))
XXX S1: so [(I can have it like that?)
XXX IS31: [but
XXX yea: but
XXX a- as this homework is graded by other TA's
XXX so I think it should be right.°
XXX S1: ok
XXX IS31: ((chuckle))
XXX maybe I can tell him
XXX S1: no cause some of the TA↑ I see it like last previous my
XXX homework,
XXX IS31: [ok
XXX S1: [they correct it,

XXX they just look at the answer
XXX they don’t do- look at [like ok
XXX IS31: [oh:
XXX one- one TA that I got it.
XXX and was like no this is not right.
XXX like that way
XXX I was like ok [this is (.) correct but
XXX IS31: [ok maybe you can (.)
XXX you can talk to him
XXX you can say that-
XXX S1: yea and I talked to
XXX um
XXX the person he’s like oh ok I don’t look at that
XXX >I was just like looking at them↑ it’s like<
XXX yea
XXX IS31: ((nodding))
XXX just like being lazy=
XXX IS31: =yea it should be fine↓ because you can only (.) get two
XXX digits in this table.°
XXX S1: yea=
XXX IS31: =yea ((nods))
XXX S1: thanks
XXX ((pause))
XXX IS31: your professor will have a review, (.) today (.) for the
(.)
XXX midterm?
XXX ((to someone off screen))
XXX S3: yea
XXX S2: I have question.°
XXX four point twenty three,° (.1)
XXX part c,°
XXX IS31: mm: (.2)
XXX ((nods)) oh
XXX S2: I understand to here= ((pointing @paper))
XXX IS31: =mm:
XXX S2: and I don’t get it from here,°
XXX IS31: uh:
XXX so:
XXX there is a relation↑ between (.) uh:°
XXX like (.1) [five x,-
XXX S2: oh
XXX [((unclear))
XXX IS31: [and five (.) oh°
XXX S2: ((shuffling through papers))