



David Eisenbud <de@berkeley.edu>

Chapter 15

1 message

Izzet Coskun <coskunizzet@gmail.com>

Wed, Nov 22, 2023 at 12:57 PM

To: Joe Harris <harris@math.harvard.edu>, David Eisenbud <de@berkeley.edu>

Dear Joe and David,

Here are some comments on Chapter 15.

Best, Izzet

page 278, line 1, you have a broken reference

page 279, sentence before 15.3, the reference is broken

page 280, statement of 15.3.1, repeated 'of' in 'curves of of degrees'

page 281, first sentence of proof of 15.3.1, you use 'whence' throughout the book fairly regularly. I am wondering whether sometimes just 'hence' or 'so' wouldn't be better

page 281, last line of Remark 15.3.2, broken reference

page 281, line 4 of paragraph after Def 15.4.1, broken reference to exercise

page 281, line 7 of proof of 15.4.2, repeated is in 'R is is zero-dimensional'

page 282, first line of 15.5.1, broken reference

page 282, definition 15.5.2, do you have an extra 'over' in 'scheme over of pure'

page 282, first sentence after Def 15.5.2, would it be better to replace $\text{Hom}(F, \omega_X)$ with $\text{Hom}(L, \omega_X)$?

page 282, line -2, should the pair (ω_X, ρ) be (ω_X, η) ?

page 283, line 6 of proof of 15.5.3, extra)

page 283, line 10 of proof of 15.5.3, broken reference

page 283, line 12 of proof of 15.5.3, additional)

page 283, the end of the proof of 15.5.3, when you write \otimes_C , do you mean $\otimes_{\mathcal{O}_C}$?

You are not consistent in specifying the object over which the tensor product is taken. E.g., you omit it in the statement and some calculations but not others.

page 284, line 4 of 15.6, the reference to Hartshorne is broken (or maybe the second Hartshorne should not be there?)

page 284, line 2 of paragraph 3 of 15.6, what is F or more accurately \mathcal{F} ? Is this meant to be any coherent sheaf on X ?

page 284, line 25 of 15.6, be the formula 'which/that' takes the form?

page 284, 3 lines before 15.6.1, repeated 'the'

page 284, statement of 15.6.1, the residue map is ρ instead of η

page 285, line 2 of proof of 15.6.1, $H^d(f_*(F))$ has missing)

page 285, the last sentence of the proof of 15.6.1, should it be so $\omega_X = f^!(\omega_Y)$?

page 286, line 2, should $O_X(s+b-4)$ be $O_X(s+t-4)$?

page 286, line 6, should these Homs be Sheaf Homs?

page 286, line 22, mismatched parentheses. I think you need $)$ after $(1-p_a(O_C))$

page 286, line 24, missing parenthesis $p_a(O_C')$

page 287, line 14 of proof of 15.6.4, should Ext be sheaf Ext?

page 288, line 2, do you want to include Hom is over \mathbb{C} ?

page 289, sentence before 15.8, extra of? in 'that have of reasonably large degree'

page 289, first sentence of 15.8, broken reference

page 291, line 5 of Example 15.8.2, need space between idempotents. and Writing

page 291, line 16 of Example 15.8.2, As should not be capitalized

page 293, line 18, you might want a period at the end of the sentence after the formula for $\deg(F)$

page 294, line 10 in exercise 15.10.3, mismatched parentheses in $H^1(I_C(1))$

page 294, line 5 in exercise 15.10.4, π_2 should be π_2

page 295, line 5 of exercise 15.10.6, repeated then

page 295, are the indices in exercise 15.10.9 correct? Should they be 1, 2 instead of 0, 1?

page 296, line 11 of exercise 15.10.12, extra $($ in $x_0 F + x_1 G$

page 296, exercise 15.10.14, do you want to capitalize Cartier?

Isn't exercise 15.10.15 redundant? Didn't you also ask it in exercise 15.10.10?