

Kevin Wald: Commutative Algebra 101
From the 1995 Univ. of Chicago Beer Skits

I am Sam.

Sam I am.

That Sam-I-am!

That Sam-I-am!

I do not like

that Sam-I-am!

Do you like this diagram?

I do not like it, Sam-I-am.

I do not like this diagram.

Would you chase it here or there?

I would not chase it here or there.

I would not chase it anywhere.

I do not like this diagram.

I do not like it, Sam-I-am.

Would you draw it with a p -group?

Would you draw it with a Lie group?

I would not draw it with a p -group.

I would not draw it with a Lie group.

I would not chase it here or there.

I would not chase it anywhere.

I do not like this diagram.

I do not like it, Sam-I-am.

Would you draw it with a Tor group?

How about the cyclic four-group?

Not with a Tor group.

Not with a four-group.

Not with a p -group.

Not with a Lie group.

I would not chase it here or there.

I would not chase it anywhere.
I do not like this diagram.
I do not like it, Sam-I-am.

Would you? Could you?
With a star?
Chase it! Chase it!
Into **R**.

I would not, could not, into **R**.

You can chase it into **C**.
Or **Q** adjoin root minus 3.

I would not, could not into **C**.
Nor into **R**! You let me be.
I will not draw it with a Tor group.
I will not draw it with a four-group.
I will not draw it with a p -group.
I will not draw it with a Lie-group.
I will not chase it here or there.
I will not chase it anywhere.
I do not like this diagram.
I do not like it, Sam-I-am.

A chain! A chain!
A chain! A chain!
Could you, would you,
With a chain?

Not with a chain! Not into **C**!
Not into **R**! Sam! Let me be!
I would not, could not, with a Tor group.
I could not, would not, with a four-group.
I will not draw it with a p -group.
I will not draw it with a Lie-group.
I will not chase it here or there.
I will not chase it anywhere.
I will not chase this diagram.
I do not like it, Sam-I-am.

Could you draw it like Mac Lane?

I could not draw it like Mac Lane.

I would not draw it with a chain.

Not into \mathbf{R} . Not into \mathbf{C} .

Nor \mathbf{Q} adjoin root minus three.

Not with a Tor group. Not with a p -group.

Not with a four-group. Not with a Lie group.

I will not chase it here or there.

I will not chase it anywhere!

You do not like this diagram?

I do not like it, Sam-I-am.

Would you tensor with \mathbf{Z} -hat?

I would not tensor with \mathbf{Z} -hat.

Could you show that it is flat?

I cannot show that it is flat.

I will not tensor with \mathbf{Z} -hat.

I could not draw it like Mac Lane.

I would not draw it with a chain.

Not into \mathbf{R} ! Not into \mathbf{C} !

Not with a star! You let me be!

I do not like it with a Tor group.

I do not like it with a four-group.

I will not draw it with a p -group.

I will not draw it with a Lie group.

I will not chase it here or there.

I will not chase it ANYWHERE!

I do not like this diagram!

I do not like it, Sam-I-am.

If you don't chase this diagram,

You're gonna flunk your topic exam.

Oh!

Well A here maps to B .

Then to C , here,
then to D .
Say!
I like this diagram!
I do! I like it, Sam-I-am.
And I can tensor with \mathbf{Z} -hat,
And use the fact that it is flat
(As shown in Eilenberg-Mac Lane),
Which means it's an acyclic chain,
And so, from \mathbf{R} (or even \mathbf{C})
By straight commutativity
We get a mapping through the Tor group
(Mod out by the cyclic four-group)
Into $SU(5)$, our Lie group.
Consequently, from the p -group,
We get mappings here and there,
Which shows exactness EVERYWHERE!
I do so like this diagram!
Thank you!
Thank you, Sam-I-am!