

# CANADIAN PHYSICS COUNTS

**We Need Your Input!**

Help us design the next national survey of Equity, Diversity,  
 and Inclusion in Canadian physics.

[Take our Short Engagement Survey](#)

Scan the QR code and tell us what you want to know about the Canadian physics community.



Investigators: Dr. Adrianna Tassone, Dr. Eden Hennessey, Skye Hennessey, Dr. Shohini Ghose, Anastasia Smolina  
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University of Toronto  
Dalhousie University  
This study has been reviewed and approved by the Laurier Ethics Board (REB # 9615).

# NEURO- DIVERGENCE IN PHYSICS

Feel free to take photos!

Presented by: Day MacKay





# Day MacKay

STUDENT

PRESIDENT

(CAT- & NEURO-) MOM







## **HOW DO YOU QUANTIFY THAT?**

What does "super autistic" look like?



## HOW DO YOU QUANTIFY THAT?

What does “super autistic” look like?

### **PERSPECTIVE.**

*“How much friction does this autistic person cause for those around them?”*

ASD

‘AUTISM SPECTRUM DISORDER’

ASD

‘AUTISM SPECTRUM DISORDER’



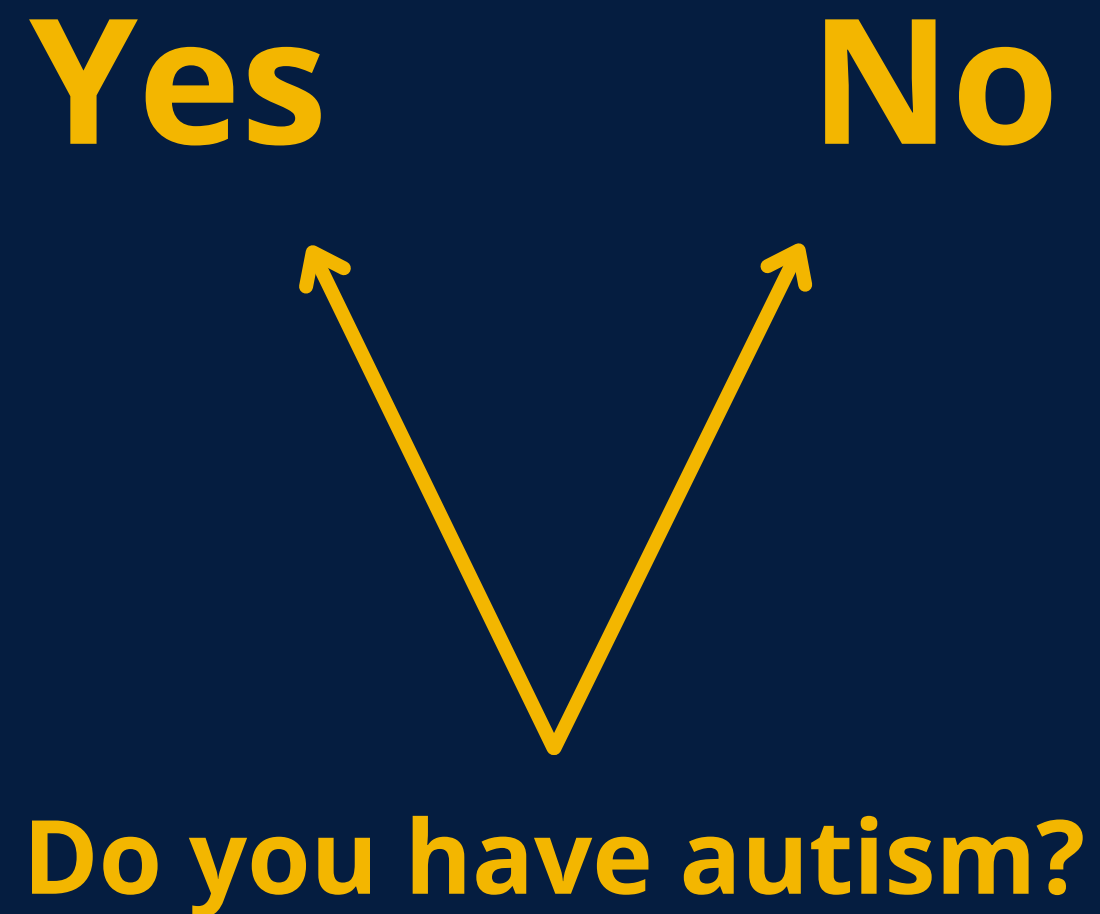
“a lil”



“a lot”

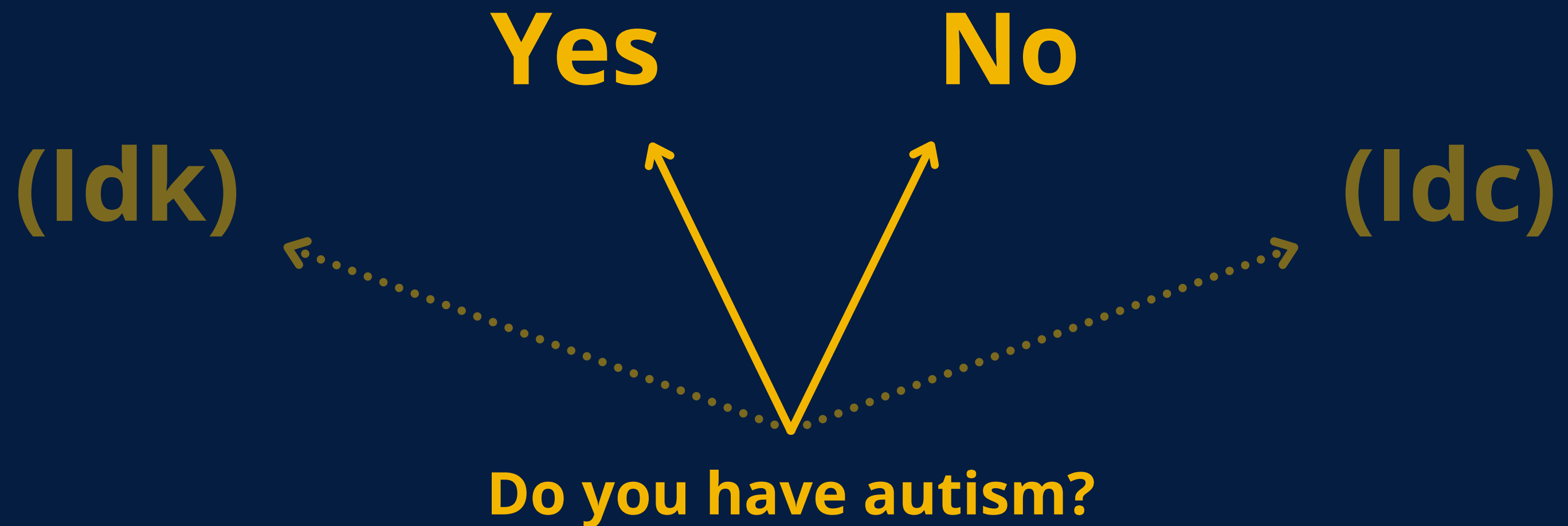
# IT'S NOT A BINARY

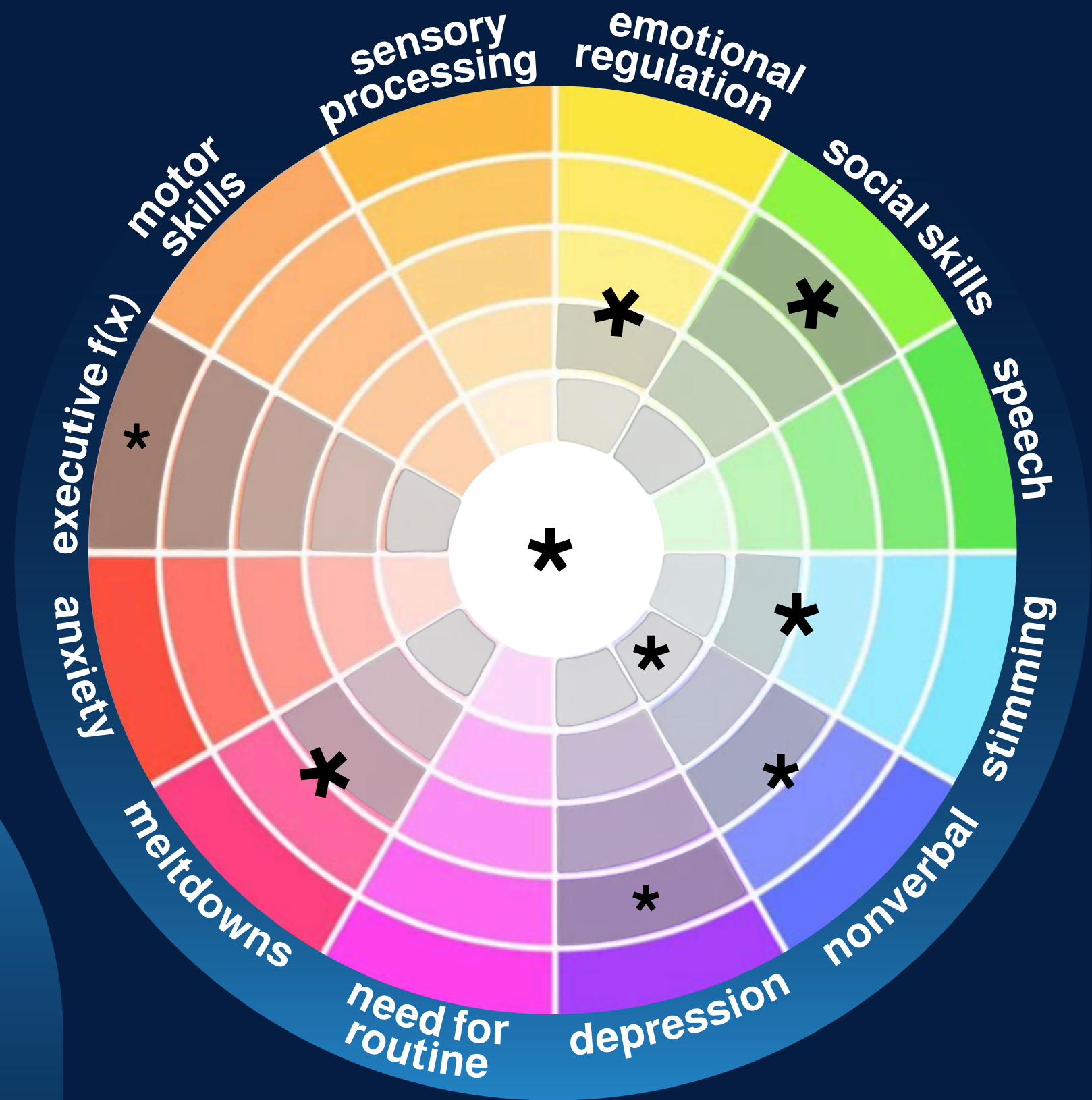
The only "binary" part of autism is how to answer this question:



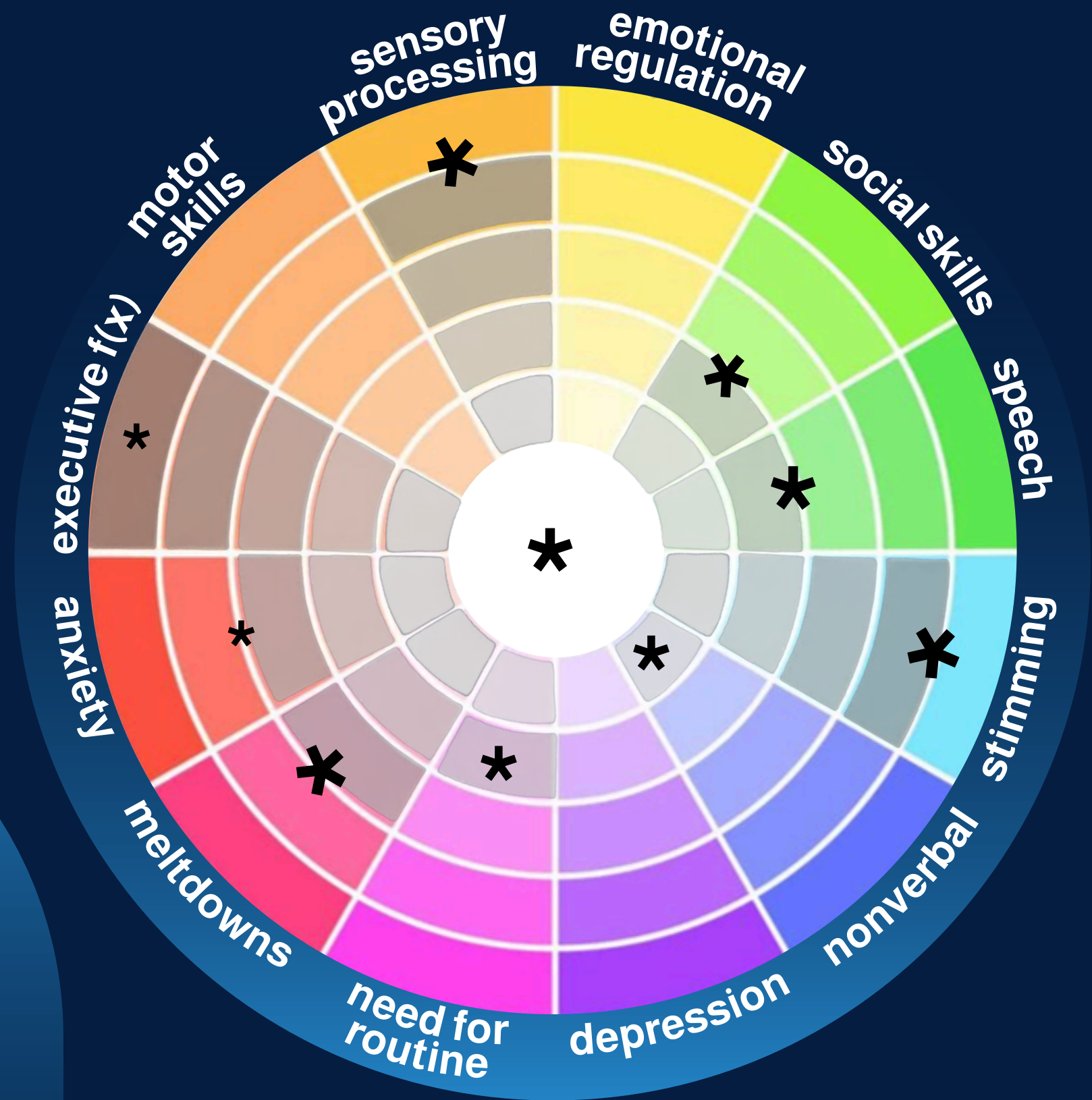
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The only "binary" part of autism is how to answer this question:

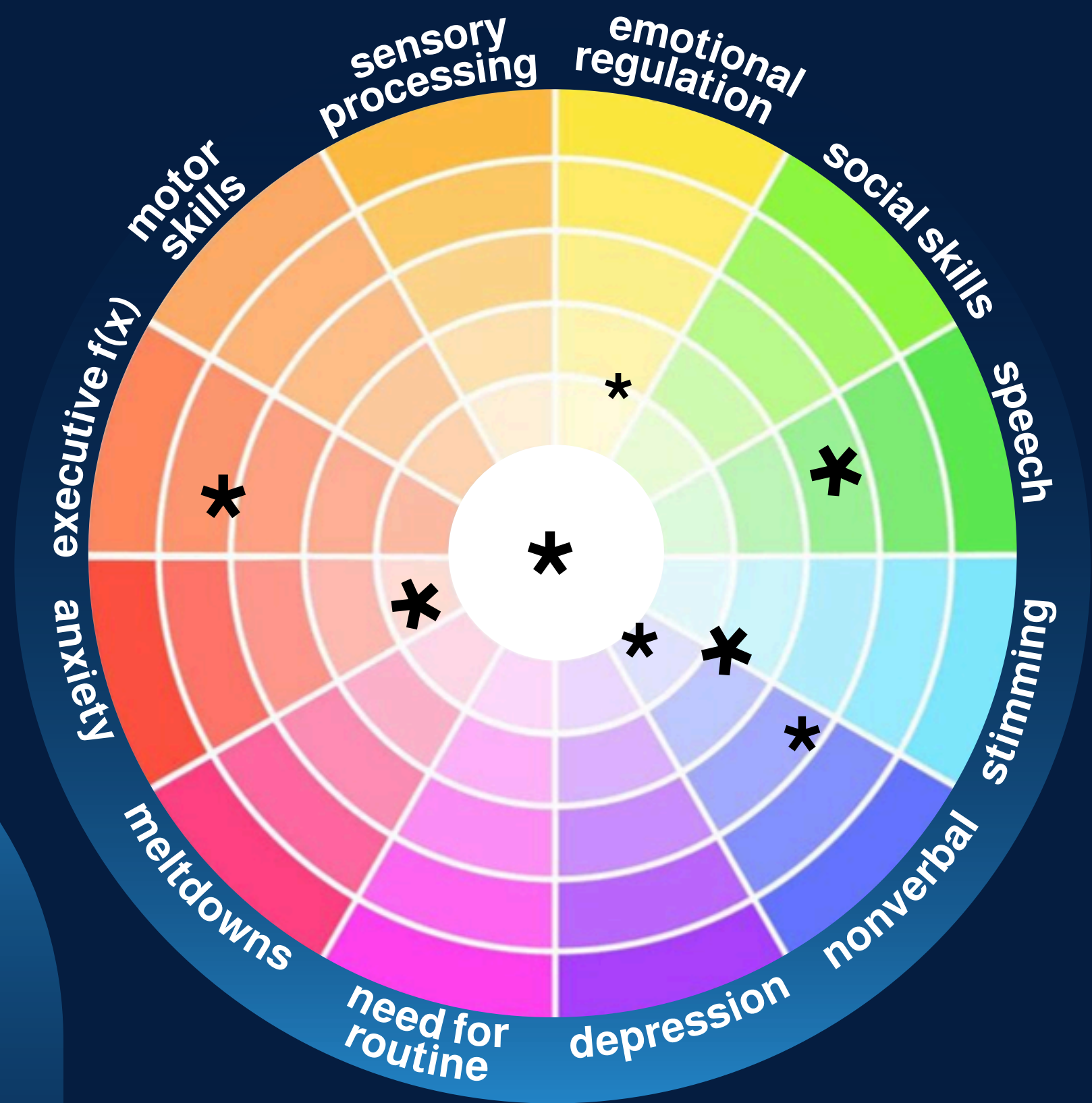




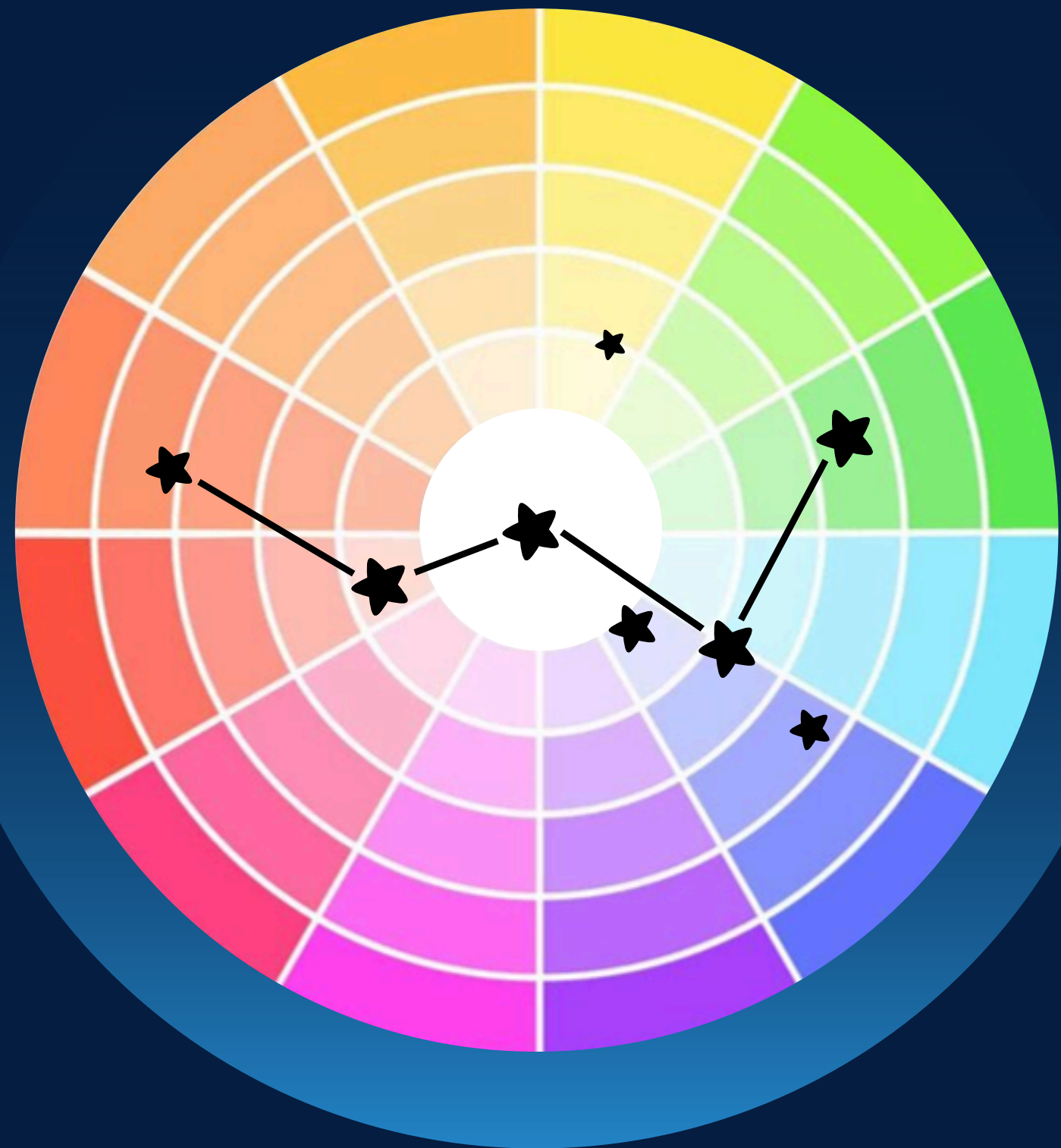
Each experience is



Each experience is individual and unique



Each experience is individual and unique like a...



Each experience is  
individual and unique  
like a...

**...CONSTELLATION**



**“RUDE”**



for avoiding eye contact

**“DISRUPTIVE”**



for stimming to manage stress

**“UNPREPARED”**



for requesting extra time on tests

**“NO WORK ETHIC”**

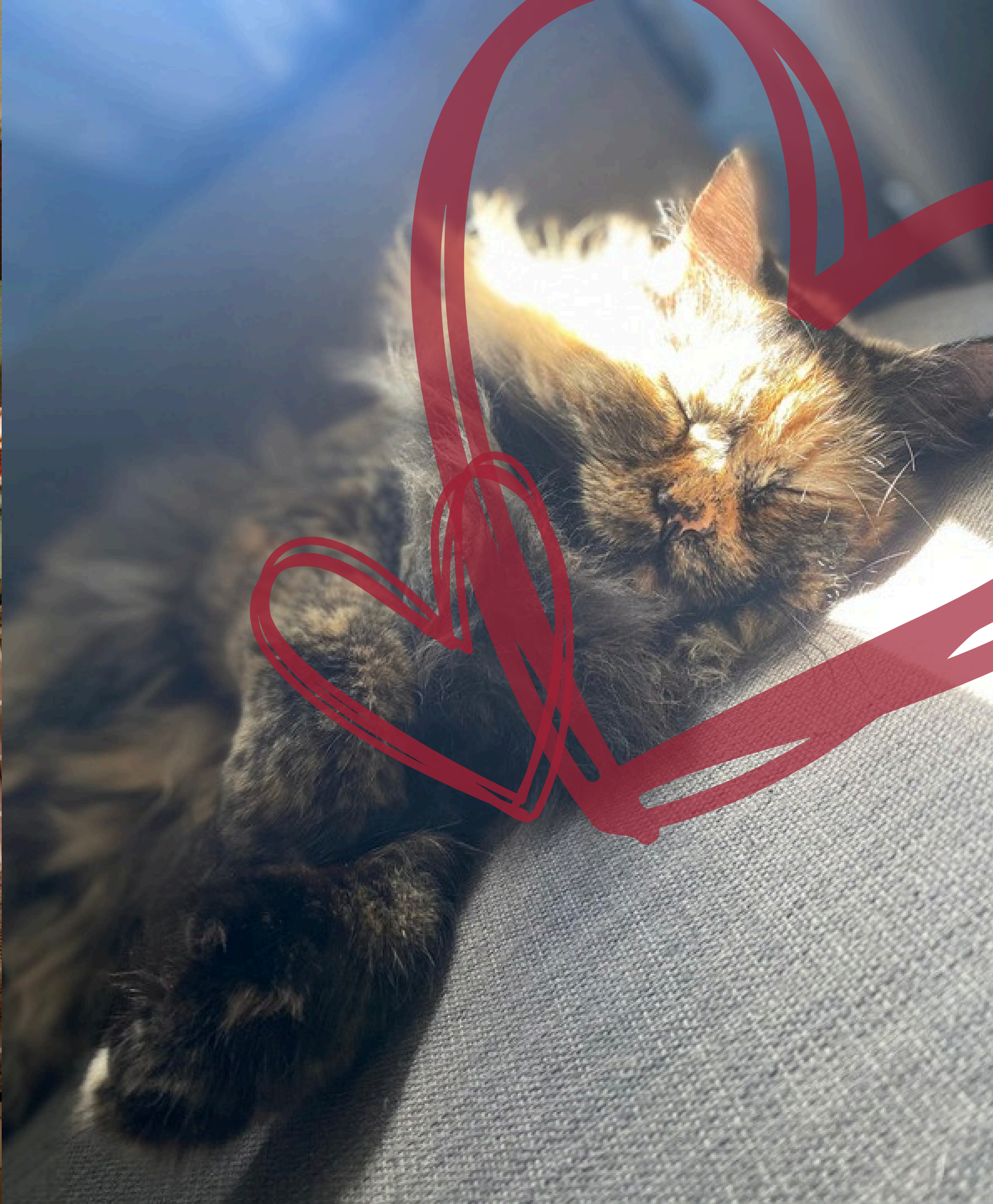


for taking a reduced course load

**“ANNOYING”**



for talking about your special interest



# ACCOMMODATIONS

Often only exist on paper

**not in practice.**

Canada's Highschool average graduation rate is **95%**

**67%** 1<sup>st</sup> year undergraduates don't report a disability

1<sup>st</sup> year undergrads entering STEM is **1** in **3** 

after 5 years, **7** of **10** **STAY** in **STEM**

Canada's Highschool average graduation rate is **95%**

▶ **65%** if you're autistic

**67%** 1<sup>st</sup> year undergraduates don't report a disability

▶ **33%** do report a disability, 2 in 5 are neurodivergent

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▶ it's the **same** for autistic 1<sup>st</sup> year undergrads 

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▶ ... **we don't know**



**There are NO STATISTICS  
on autistic STEM student retention rates.**



There are NO STATISTICS  
on autistic STEM student retention rates.

We know little about who's leaving and even less about why they're leaving.



# FACULTY:

95%

1

90%

1%





# FACULTY:

95%

did not receive adequate accommodations at their place of work

1

out of 138

of 138 physics webpages met adequate accessibility needs

90%

don't feel adequately prepped to teach students with disabilities

less than  
1%

of physics educational research papers mention disabilities



**Accommodations**

**Accessible Design**



## Accommodations

are not the clean up crew for inaccessible design

## Accessible Design

does not include lowering standards.  
It removes unnecessary difficulty to  
focus meaningful difficulty



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*So then, how do we move forward?*





▶ **AWARENESS**

We start here.  
Talking, asking, and learning about it with others. Getting comfortable with curiosity!

▶ **QUESTION**

How can academic physics environments become more accessible to neurodivergent researchers?

▶ **ANALYZE**

Analyzing the academic literature on neurodivergence and autism, UDL, and accessible practices in physics community.

▶ **SURVEY**

Survey and review all publically available accessibility information for official plans, offices, resources, etc.

▶ **DESIGN**

Translating all these findings into practical applicable recommendations for physics community (and academic) design.

**AWARENESS** **I am seen**

**ACCESSIBILITY** **I am expected**

**BELONGING** **I want to stay**

**AWARENESS** I am seen

**ACCESSIBILITY** I am expected

**BELONGING** I want to stay



[forms.gle/1r64tLdYUpQfPBH5A](https://forms.gle/1r64tLdYUpQfPBH5A)

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