

Announcements

Quiz return (instructions on quizzes web page)

- Your graded Quiz #4 is now available online
 - Regrade request deadline: Friday in class (see web page for specific instructions)

WeBWork #10 is now open

- Due Wednesday at 9pm
- Covers material from “Unit 10”—see syllabus web page

Quiz #5 will take place here on Friday, March 24

- Covers material from Units 9–10 (same material as WeBWorks #9–10)
- You must bubble in your student number with a **black pen**
- You must bring your student ID to class on every quiz day, and take the quiz in the section you're registered in

Monday, March 20

Clicker Questions

Clicker Question 1

Types of convergence

The series $\sum_{n=1}^{\infty} \frac{\sin(3^n)}{3^n}$
is ...

We can rule out ...

C and **D**: convergent means *one* of absolutely conv. or conditionally conv., but *never both*

E: absolutely convergent always implies convergent

- A. ... both absolutely convergent and convergent, but not conditionally convergent.
- B. ... both conditionally convergent and convergent, but not absolutely convergent.
- C. ... convergent, but neither absolutely convergent nor conditionally convergent.
- D. ... absolutely convergent and conditionally convergent and convergent.
- E. ... both absolutely convergent and conditionally convergent, but not convergent.

Clicker Question 2

A limit of a ratio

Suppose we have the series

$$\sum_{n=3}^{\infty} a_n, \quad \text{where} \quad a_n = \frac{(n-1)!}{2^{n(n-1)}}.$$

What is $\lim_{n \rightarrow \infty} \left| \frac{a_{n+1}}{a_n} \right|$?

- A. ∞
- B. 1
- C. 0
- D. $1/2$
- E. none of the above

The calculation

$$\begin{aligned} \lim_{n \rightarrow \infty} \left| \frac{a_{n+1}}{a_n} \right| &= \lim_{n \rightarrow \infty} \frac{n! / 2^{(n+1)n}}{(n-1)! / 2^{n(n-1)}} \\ &= \lim_{n \rightarrow \infty} \frac{n!}{(n-1)!} \frac{2^{n^2-n}}{2^{n^2+n}} \\ &= \lim_{n \rightarrow \infty} n \cdot \frac{1}{2^{(n^2+n)-(n^2-n)}} \\ &= \lim_{n \rightarrow \infty} n \cdot \frac{1}{2^{2n}} = \lim_{n \rightarrow \infty} \frac{n}{4^n} = 0. \end{aligned}$$

Monday, March 20

“More than Math Mondays”



First day of spring
edition



S E X

Resources

- **UBC Student Health Service**
 - birth control
 - STI tests
 - HPV vaccine
 - other standard tests
- **UBC Wellness Centre**
 - Safer Sex Product Guide
 - Sex and Sexual Health
 - Consent is Clear
- **Sexual Assault Support Centre and UBC Pride Collective**
 - information, complimentary condoms, etc.
- **SexualityandU.ca**

(These slides are posted on our section's web page, with all hyperlinks enabled.)

Monday, March 20

Cultural Myth #1

There's some "right amount" of sex to have, in the "right situations", with the "right people"; others get to police you.

The truth: **your decision**

You can have as much—or as little—sex as you want, for whatever reasons you want, with any gender you want. Nobody else gets to decide for you, or shame you for your choices.

Cultural Myth #2

There's some secret code, some complicated flowchart of situations and timing, some set of loopholes. . . ; successfully navigating this code is the way to get to have sex with someone.

The truth: **consent culture**

If you and they want to have sex with each other, then do so. If you're not sure what they want, find out first.