

Announcements

If you submitted your Quiz #3 for a **regrade**, come pick it up from me (before or after class)

WeBWorK #8 is now open

- Due Wednesday at 9pm
- Covers material from “Week 8”—see syllabus on course web page

Solutions to (all versions of) Quiz #4 are online

- Quiz #4 papers will be available in the MLC starting Thursday
- Grades will be posted in Connect by Friday

Monday, March 7

Clicker Questions

Clicker Question 1

Partial sums that simplify

By finding a formula for s_n , the n th partial sum of the series

$$\sum_{i=1}^{\infty} (2^{3/i} - 2^{3/(i+1)}),$$

calculate the value that the series converges to.

- A. 7
- B. 0
- C. 8
- D. -1
- E. none of the above

A telescoping sum

$$\begin{aligned} s_n &= (2^{3/1} - 2^{3/2}) + (2^{3/2} - 2^{3/3}) + \dots \\ &\quad + (2^{3/(n-1)} - 2^{3/n}) + (2^{3/n} - 2^{3/(n+1)}) \\ &= 2^{3/1} - 2^{3/(n+1)}. \quad \text{So} \end{aligned}$$

$$\begin{aligned} \sum_{i=1}^{\infty} (2^{3/i} - 2^{3/(i+1)}) &= \lim_{n \rightarrow \infty} (2^{3/1} - 2^{3/(n+1)}) \\ &= 8 - 2^0 = 7. \end{aligned}$$

Clicker Question 2

Dividing a complicated series into simpler ones

Using previous examples from this lecture, calculate

$$\sum_{i=1}^{\infty} \left(\frac{3}{7} (2^{3/i} - 2^{3/(i+1)}) - \frac{4}{i^2 + 8i + 15} \right).$$

- A. -2
- B. 6.1
- C. 2.1
- D. -6
- E. none of the above

Series laws in action

$$\begin{aligned} & \sum_{i=1}^{\infty} \left(\frac{3}{7} (2^{3/i} - 2^{3/(i+1)}) - \frac{4}{i^2 + 8i + 15} \right) \\ &= \frac{3}{7} \sum_{i=1}^{\infty} (2^{3/i} - 2^{3/(i+1)}) \\ &\quad - \frac{4}{10} \sum_{i=1}^{\infty} \frac{10}{i^2 + 8i + 15} \\ &= \frac{3}{7} \cdot 7 - \frac{4}{10} \cdot \frac{9}{4} = 3 - 0.9. \end{aligned}$$

Monday, March 7

“More than Math Mondays”

Monday, March 7

Equity Enhancement Fund (EEF)

- “Supports community-based initiatives that enhance equity, diversity, inclusion and intercultural understanding at UBC”
- Recent examples: Healthier Masculinities, F-Word Conferences, Indigenous Sharing Series, Mental Health First Aid, Beyond the Binary, All Our Voices
- Goals: build community competencies and understanding; promote a respectful environment
- Funding up to a maximum of \$25,000
- Proposal writing session for students **Thursday (March 10)**, 5–6pm, Chilcotin Board Room (Barber 256)

Application forms to be completed by **April 1, 2016**

For more details

<http://equity.ubc.ca/eef-fund/>

But aren't we past all that?

Think about UBC in the news recently:

- Sexual assaults reported, but going unaddressed
- UBC President, a visible minority, ousted from his position after immediate criticism of his “leadership style”
- UBC Pride flag burned
- Gender inequity among faculty in Science departments (and increasing inequity in class enrollment from first to fourth year)

We still need lots of progress.

- Progress **never** just happens by itself
- UBC is your community. You can make it better!