

Announcements

WeBWork #3 is due Wednesday, January 27 at 9pm

- Covers material from “Week 3”—see syllabus on course web page

Solutions to (all versions of) Quiz #1 are online

Pick up your quiz papers in the Math Learning Centre

Quiz #2 will take place here on Friday, January 29 (second half of class time)

- Covers material from Week 2 and Week 3
- You **must** bring your student ID to class on every quiz day
- You **must** take the quiz in the section you're registered in

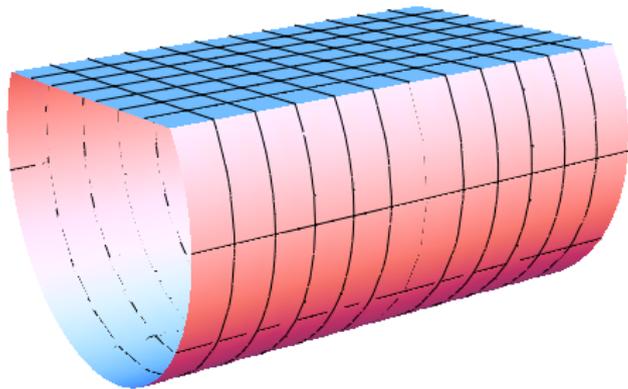
Monday, January 25

Clicker Questions

Clicker Question 1

Cross section of a tank

A water tank is in the shape of a cylinder lying on its side. Its length is 11 m and its radius is 3 m. If the cylinder is cut by a horizontal plane y m above its center and then covered by a flat roof, what is the area of the roof?



- A. $22\sqrt{9 - y^2} \text{ m}^2$
- B. $22 \cos(y/3) \text{ m}^2$
- C. $22 \sin(y/3) \text{ m}^2$
- D. $22y \text{ m}^2$
- E. none of the above

Clicker Question 2

Combining average values

Suppose the average value of a function $f(x)$ on the interval $[1, 2]$ equals 12, while the average value of the same function on the interval $[2, 6]$ equals 2. What is the average value of $f(x)$ on the interval $[1, 6]$? **Example of such a function: $f(x) = 24/x^2$.**

Warning and hint

The answer *isn't* 7! Consider $\int_1^6 f(x) dx = \int_1^2 f(x) dx + \int_2^6 f(x) dx$.

- A. 14
- B. $\sqrt{24}$
- C. 10
- D. 4
- E. more information is needed

Step by step

$\frac{1}{2-1} \int_1^2 f(x) dx = 12$, so $\int_1^2 f(x) dx = 12$.

$\frac{1}{6-2} \int_2^6 f(x) dx = 2$, so $\int_2^6 f(x) dx = 8$.

So $\int_1^6 f(x) dx = 12 + 8 = 20$, which

means $\frac{1}{6-1} \int_1^6 f(x) dx = 4$.

Monday, January 25

“More than Math” Mondays



Monday, January 25

Thrive.ubc.ca

- Myths and facts concerning suicide, and warning signs
- Many links to support services for people with challenges or mental health concerns

Other helpful people (links on course web page)

- Science students with emotional or medical difficulties
- AMS Speakeasy service "provides peer support for students facing a wide variety of challenges"
- Support groups, newly created by AMS SASC

You're not the only one

- We're fooled by society: "perfection, or we're unworthy"
- We know our own challenges, but don't see other people's challenges from the outside
- We're **not alone!** Not being perfect is **nothing to be ashamed about!**