Welcome to 18.02 Recitation

Mass Tech

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About me

- Evan Chen (evan@evanchen.cc), I'm a 5th-year grad student.
- Please call me Evan and not any of this Mr. Chen nonsense
- My recitation is MW 9:05-9:55am in 2-135 (right now).
- My office hours is 10am in some room TBD.

Places to find things

- Canvas website has all the important course stuff
  - Piazza
  - Gradescope
- MIT-X has part of your problem sets
- `https://web.evanchen.cc/1802.html` will have any optional supplemental stuff I make (like these slides), it's not important

Dates

- Your first PSet is due Tue September 10. (It's shorter.)
- Midterms are Fri Sept 27, Tue Oct 22, Fri Nov 15.
  - Put these in your calendar right now, you do not want to miss them.
- Final TBD: don't book plane tickets home until date published.

What to expect

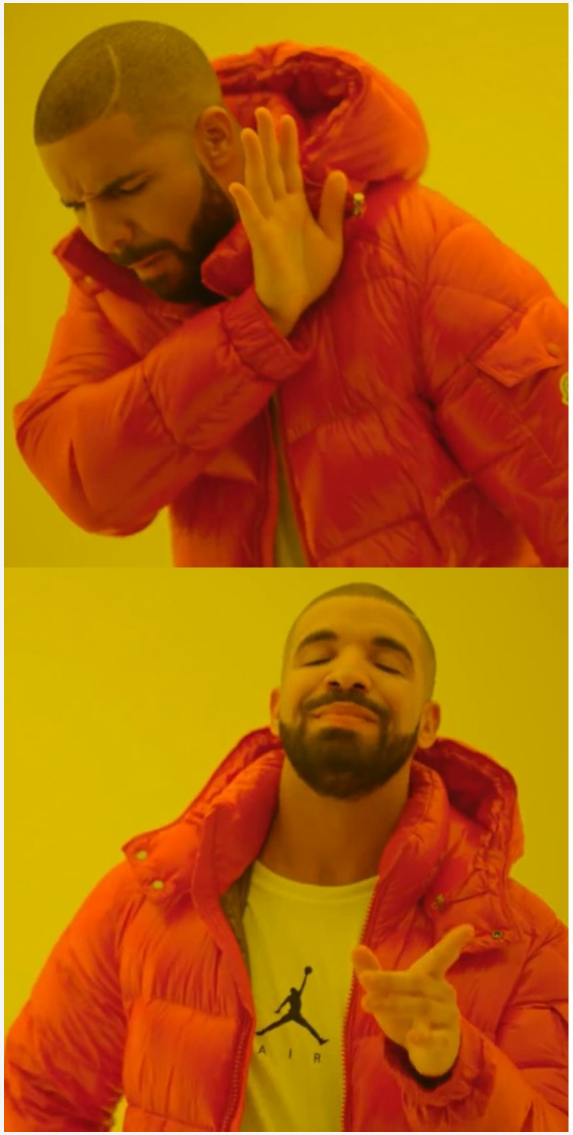
Book

- First 7-ish lectures will actually be linear algebra from Poonen's notes. No calculus at all!
- Afterwards, switch to Edwards and Penney for actual calculus.
  - but tbh Poonen probably still better than E&P.

Class

- Lecture: Maulik teaches.
- Recitation: Evan makes you do a worksheet.
  - (Today is unusual; future recitations won't have slides like this.)
  - Worksheets have about 4 problems but we won't cover them all.
  - Solutions posted later.
- Office hours: ask anything.
  - You can go to anyone's office hours.

Advice you didn't ask for



Recitation
- 25 people
- always at 9am
- stuck with evan
- literally just a worksheet
- sol later anyway

Office hours
- less crowded (esp. WThF)
- any time
- any TA
- ask anything

Intro to vectors

Type safety (see printout)

Any time you see a new operation, make sure you know what types of objects are involved.

Nouns you'll see this week

Term	Example	Notation	Container
Real num/scalar	$\frac{2}{3}$, $\sqrt{\pi}$	Lowercase (r, λ, ...)	$\mathbb{R}$
Vector	$\begin{bmatrix}3\\4\end{bmatrix} = \langle 3,4\rangle$	$\vec{v}$, $\mathbf{v}$, $\overrightarrow{PQ}$, ...	$\mathbb{R}^n$
		$\mathbf{e}_1 = \mathbf{i} = \vec{\imath} = \langle 1,0,0\rangle$ $\mathbf{e}_2 = \mathbf{j} = \vec{\jmath} = \langle 0,1,0\rangle$ $\mathbf{e}_3 = \mathbf{k} = \vec{k} = \langle 0,0,1\rangle$	
Matrix	$\begin{bmatrix}1 & 2\\3 & 4\end{bmatrix}$	Uppercase (A, M, ...)	idk

Intro to vectors (cont'd)

For linear algebra, most of our concepts will have both an algebraic definition (in coordinates) but *also* a corresponding geometric picture. You need to be able to translate between the two freely.

Fill in this table

	Notation	Type sig	Def (coords)	Pic
Vector		(noun)		
Len/mag				
Unit vector		(adj)		
Scale vector				
Add vectors				
Subtract vectors				
Dot prod. (tmrw)				