

# Spring 2019 Welcome

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Eligibility/ALEKS – Traffic Network

Email – Braess's Paradox

Accommodations – Voting

Grade Distributions – Chairman's Paradox

Self interest can be harmful

- Prisoner's Dilemma
- Adding routes can decrease throughput
- Adding powers can result in a less desired outcome

“First Time in College” students in mac1114, mac1140, mac2233 and mac2311 are required to take aleks. And they must use the FSU Summer 18 – Spring 19 cohort.

Students with dual enrolled credit, even with AAs are considered FTC.

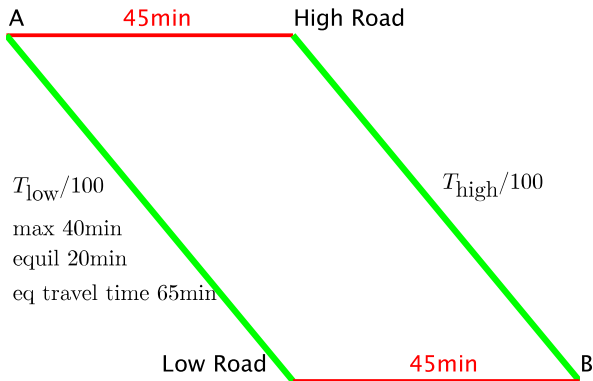
Not required for students with an FSU mac course already.

Not all college courses are equivalent. They need ALEKS for its *inventory of math skills*. And because it provides a *way to improve any weakness* it finds.

NOT a way to jump, avoid repeating, avoid trig

# A Nash Equilibrium Traffic Flow

$$4000 \text{ Autos} = T_{\text{low}} + T_{\text{high}}$$

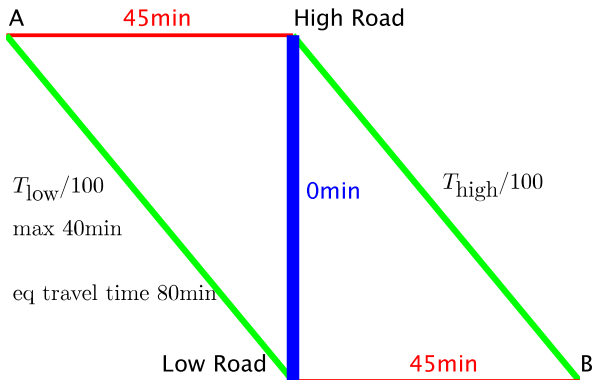


Advisors (other than Jennifer or Elizabeth) are not your friend

- Do not reply to email from students wanting to add your class, just forward them to [advisor@math.fsu.edu](mailto:advisor@math.fsu.edu)

# The Short Cut that takes 15 minutes longer

$$4000 \text{ Autos} = T_{\text{low}} = T_{\text{high}}$$



# Accommodations

- The letter isn't the request. It is a basis for discussion.
- Extra time, only at the SDRC
- Notetaker, send email to class, asking them to directly contact the SDRC.
- Anything else for TAs, should be run through either Kirby or Bellenot.



# A Three-Way Tie

Members  $X$  (Chair),  $Y$  and  $Z$  make up a hiring committee.  
There are three candidates  $a, b, c$ :

Member	Perferencs
$X$	$a > b > c$
$Y$	$c > a > b$
$Z$	$b > c > a$

Give the Chair the power to break ties.

Naive: Everyone picks their favorite, then  $X$  breaks the tie selecting  $a$ ,  $Z$ 's least favorite.

If  $Y$  and  $Z$  pick the same candidate,  $X$ 's vote is irrelevant.  
If  $Y$  and  $Z$  split their vote,  $X$  votes for  $a$  and either  $a$  wins outright, or by producing a three way tie, which is decided by  $X$  to be  $a$ .  
 $X$  can do no better than voting for  $a$

# Grade Distributions

<http://www.maa.org/CSPCC>

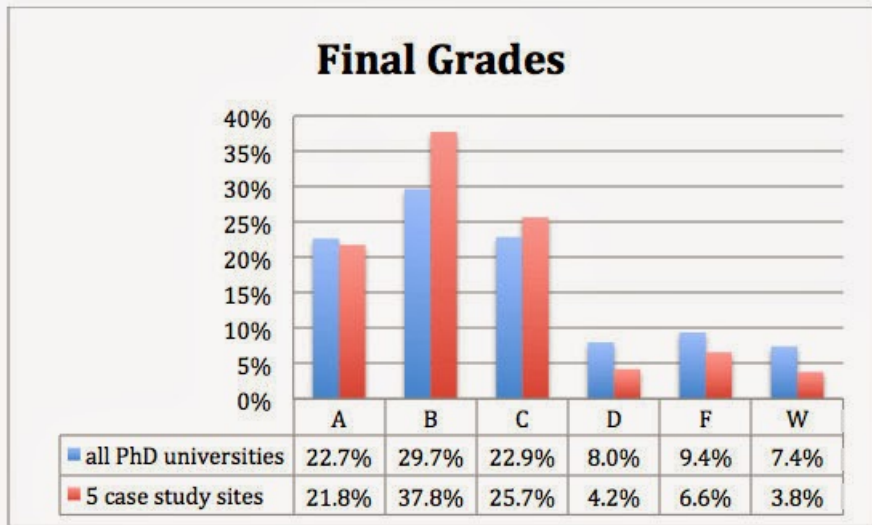


Figure 1: Instructor reported final grades.

# Winners assuming $X$ votes for $a$

		Y		
		<i>c</i>	<i>a</i>	<i>b</i>
Z	<i>b</i>	<i>a</i>	<i>a</i>	<i>b</i>
	<i>c</i>	<i>c</i>	<i>a</i>	<i>a</i>
	<i>a</i>	<i>a</i>	<i>a</i>	<i>a</i>

Y votes for  $c$  and so does Z. The result is  $c$  wins. This is  $X$ 's least favorite outcome.

# Chairman's Paradox

Giving more power to the Chair, results in the Chair getting his least favorite outcome.

Fight like hell not to be the chair.

You have a lot of support, if you need help, ask.  
You are the math department.