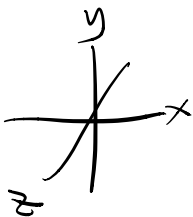


Announcements

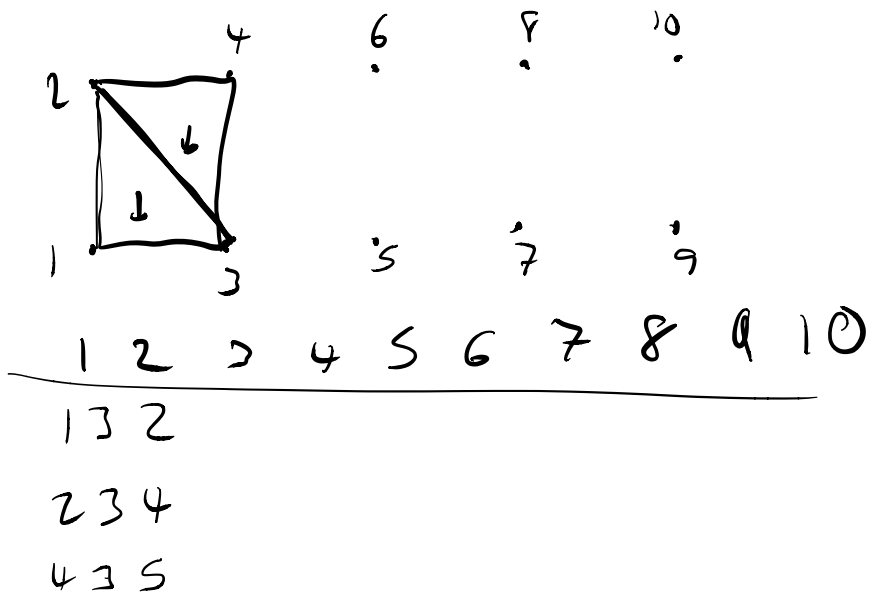
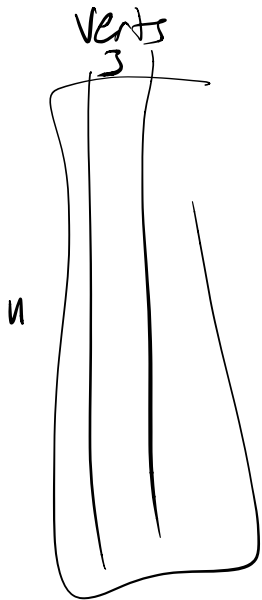
- A1, HW1 due tonight
 - Both partners use a slip day
 - 1 slip day applies to both A1 & HW1
- A2, HW2 are out! Due Monday, 2/8
- For tomorrow:
 - Find A2 partner
 - Read A2 writeup
- Feedback Survey - please respond by Thursday night.

c.

• b



• a



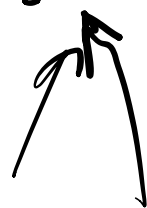
par

plane

$$p + td = a + \beta(b-a) + \gamma(c-a)$$

$$\beta(a-b) + \gamma(a-c) + td = a-p$$

$$\begin{bmatrix} T & T & T \\ a-b & a-c & d \\ \downarrow & \downarrow & \downarrow \end{bmatrix} \begin{bmatrix} \beta \\ \gamma \\ t \end{bmatrix} = \begin{bmatrix} T \\ a-p \\ \downarrow \end{bmatrix}$$



$A_{3 \times 3}$

$x_{3 \times 1}$

$= g_{3 \times 1}$



Cramer's Rule

$$\text{Let } A = \begin{bmatrix} a-b & a-c & d \end{bmatrix}_{3 \times 3}$$



$$\beta = \frac{\det \begin{bmatrix} a-p & a-c & d \end{bmatrix}}{|A|}$$

$$\gamma = \frac{\det \begin{bmatrix} a-b & a-p & d \end{bmatrix}}{|A|}$$

$$\rightarrow t = \frac{\det \begin{bmatrix} a-b & a-c & a-p \end{bmatrix}}{|A|}$$

Julia - built in

using LinearAlgebra

$$g = A \begin{bmatrix} a-p \end{bmatrix} \# \text{ solves } Ax = g$$

$$\beta, \gamma, t = g$$