Math 451

Q's

p_1 p_2 p_3 ... p_c

Fit with $f(x) = a_{n-1}x^{n-1} + \cdots + a_1 x + a_0$

(n term)

$Vc = dy$

$$\begin{bmatrix} dx.1^{(n-1)} & \cdots & dx.1 & dx.1^0 \end{bmatrix} \begin{bmatrix} c_{n-1} \\ \vdots \\ c_0 \end{bmatrix} = dy$$

over det → can't solve $Vc = dy$

best guesses solve $V'Vc = V'dy$

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weather data

ex3

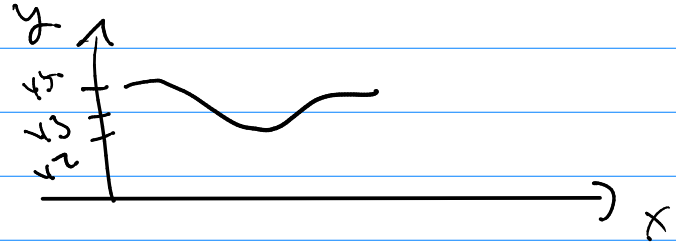
45°F | 43°F | 42°F

Jan 9 @ 1am | Jan 9 @ 2am | Jan 9 @ 3am

0 | 1/24 | 2

$y = [45, 43, 42]$

$x = [2, 0]$



Exam 3 Friday (Take-home due Monday)

(Proj 5 due Monday)

- → Systems of Lin eq
- → Interpolants
- → least squares data fit
- → Adapt. Quad
- → recursion

@ in-class
4 take-home

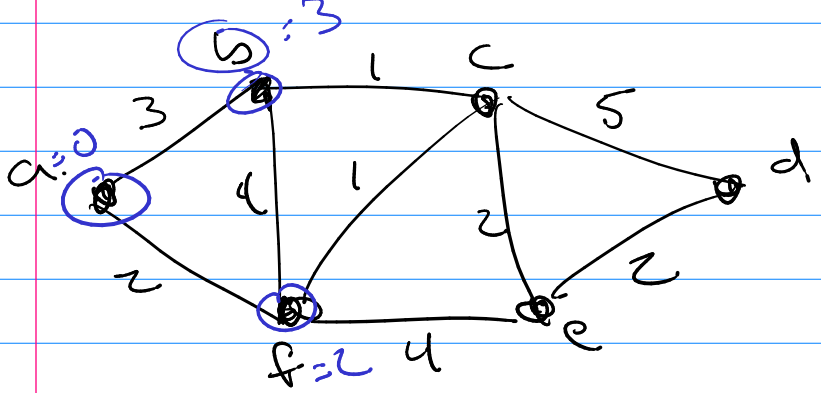
100pts = 100%

Exam 4 + projects 6/7

↑ take-home only

↔ graph theory
cryptography

Shortest paths in weighted graphs (starting at a specific vertex)



(ex) shortest paths starting @ a

Set of "found" vertices

F = [0 0 0 0 0 0]

F = [1 0 0 0 0 0]

Costs = [0 ∞ ∞ ∞ ∞ ∞]

Paths = [[1], [ ], [ ], ...]

Set of "still looking"

S = [1 1 1 1 1 1]

S = [0 1 1 1 1 1]