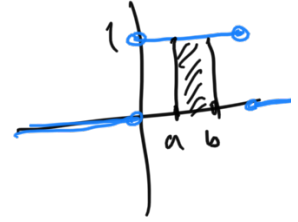


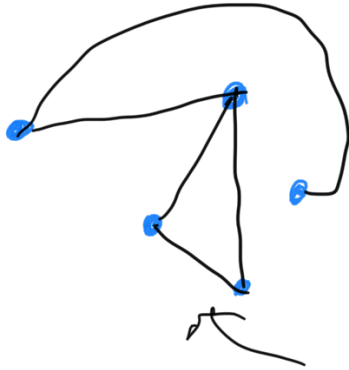
then $\text{pdf} \rightarrow y^{(n)} = \begin{cases} 0 & \text{otherwise} \end{cases}$

$$P(Y \in [a, b]) = \int_a^b g(x) dx$$

Suppose $0 \leq a < b \leq 1 \rightarrow \int_a^b 1 dx = x \Big|_a^b = b - a$





New Topic: Graph Theory (aka Network)



Vertices/Nodes

connected by Edges

(We won't allow self-edges or multiple edges)

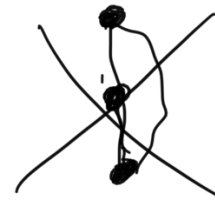
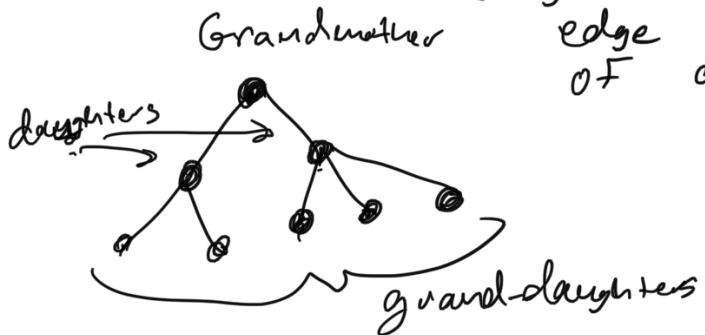
Examples

① Facebook: Vertices: people

Edges: two people are connected if they are friends.

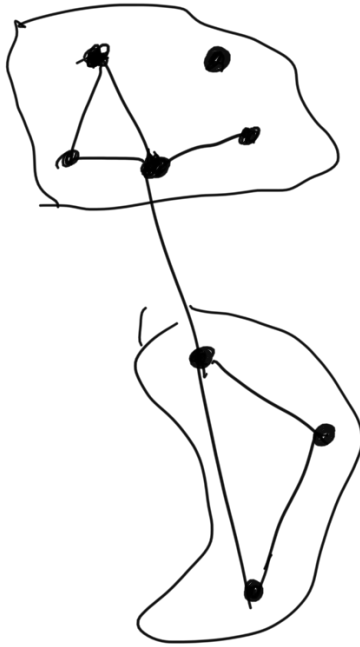
② Genealogy: Vertices: people

Edges: Alice + Bob share edge if one is parent of other



Graph w/ no loops is called tree

③ Flight routes



Vertices: Cities

Edges: Two cities share an edge if there is a scheduled flight between them.

④

Website

Vertices: pages

Edges: links between pages

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