

Graphs



Definitions



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by Christine Alvarado, Mia Minnes, and Leo Porter, 2015.**

By the end of this video you will be able to...

- Define basic notions associated with graphs

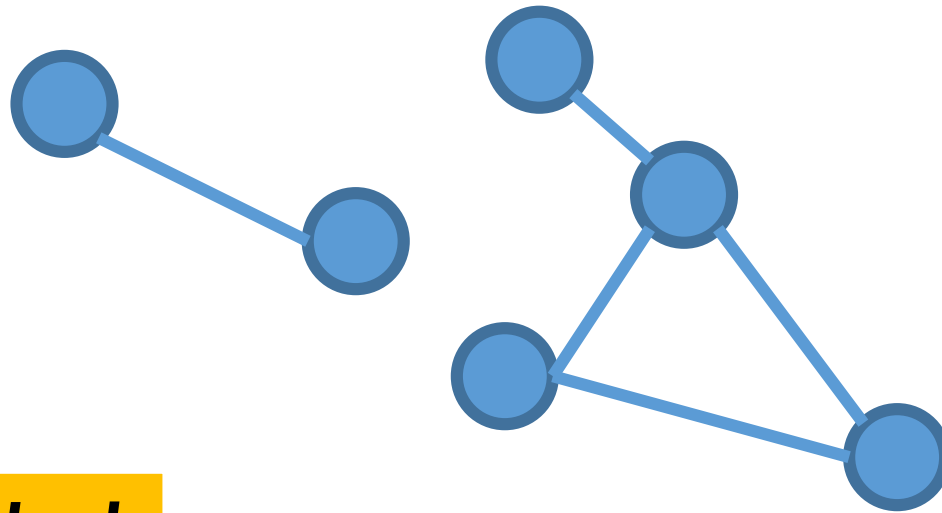
Graphs

Basic objects : vertices, nodes

V

Relationships between them : edges, arcs, links

E



Undirected

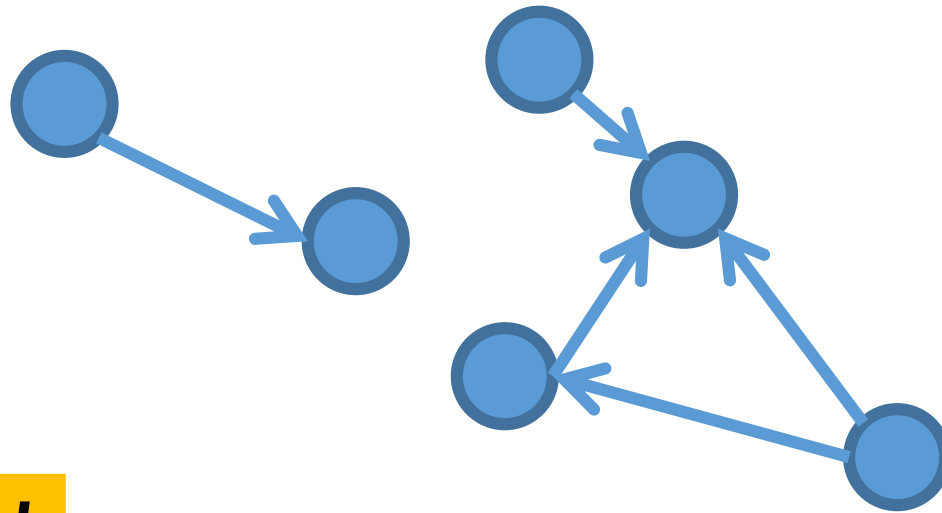
Graphs

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Directed

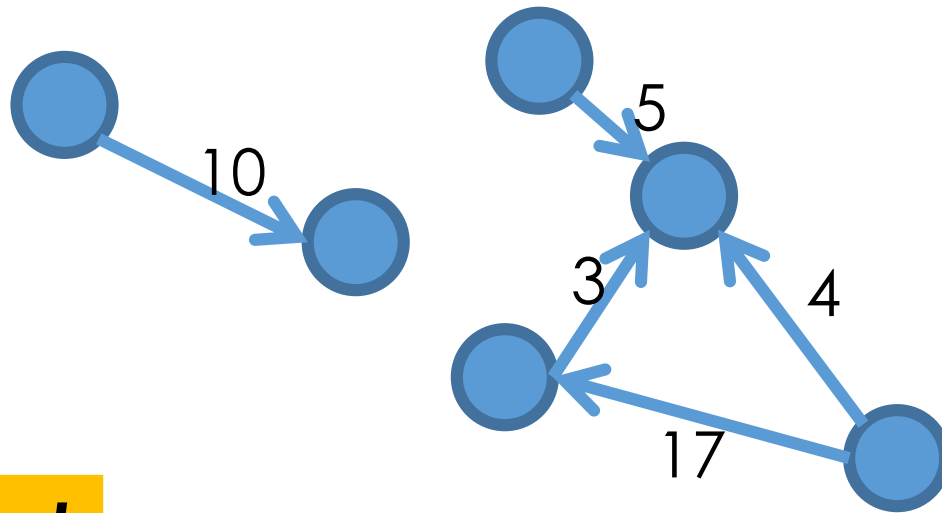
Graphs

Basic objects : vertices, nodes

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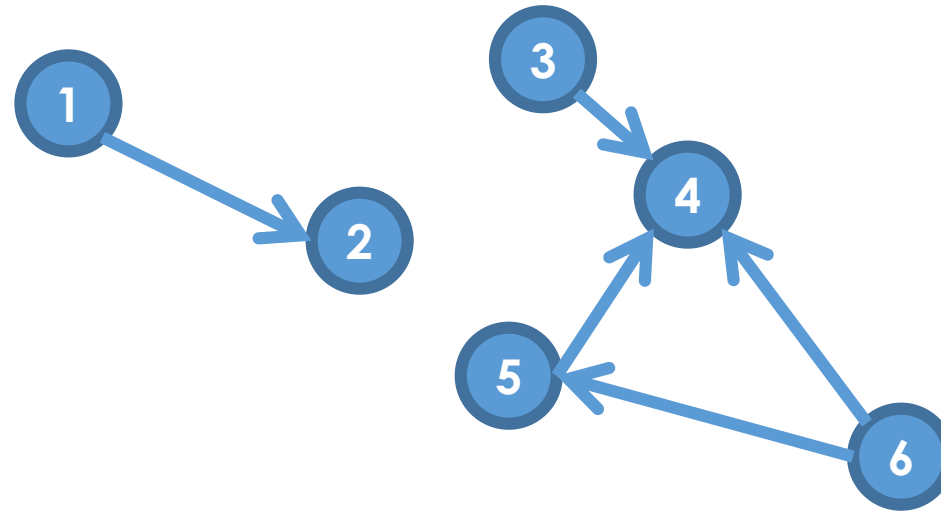
Relationships between them : edges, arcs, links

E



Weighted

Graphs: example



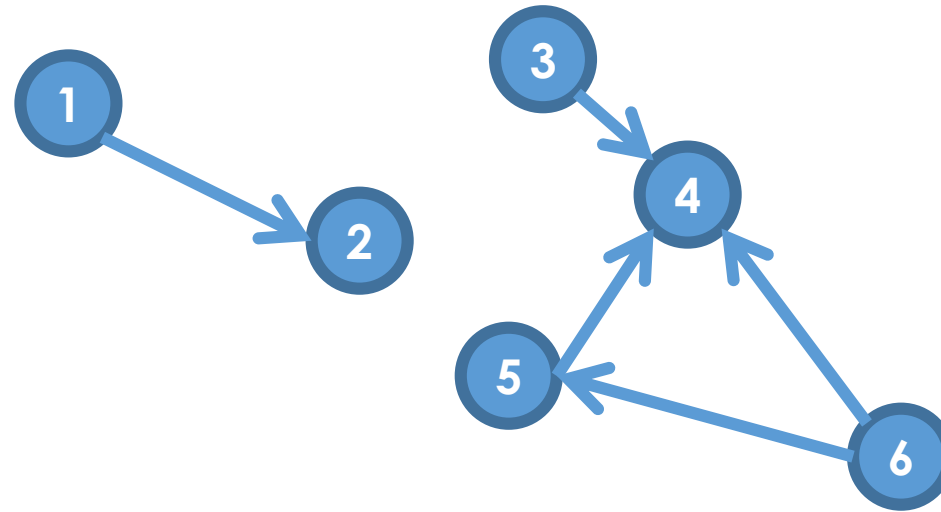
What are the neighbors of the vertex 4?

- A. 3,4,5,6**
- B. 3,5,6**
- C. 3,6**
- D. 5**

Paths in graphs

Path: sequence of vertices and edges that depicts hopping along graph

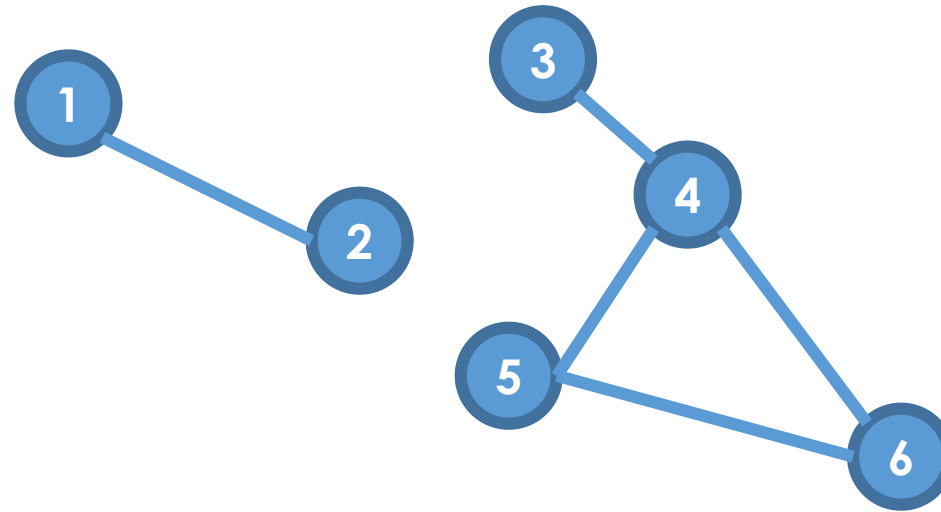
Graphs: example



For which pair of vertices is there a path in the graph starting at one and ending at the other?

- A. vertex 1 and vertex 3**
- B. vertex 4 and vertex 6**
- C. vertex 6 and vertex 5.**

Graphs: example



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