Introduction to Graphs

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- Recall the default assumptions for graphs in this course.

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- State the Handshaking Theorem and explain why it works (informally).

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Warning

Default assumptions: simple, undirected, at least one vertex, finite

The sum of vertex degrees counts every edge twice.

Definition

The *degree* of a vertex in an undirected graph is the number of edges incident to it.

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Theorem (Handshaking Theorem)

Let G = (V, E) be an undirected graph. Then

$$\sum_{v\in V} \deg(v) = 2|E|.$$

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