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Review 1-6 all exercise 1-15 odd

① A path is an alternating sequence of vertices and edges $\{v_0, e_1, v_1, e_2, \dots, v_{n-1}, e_n, v_n\}$ in which edge e_i is incident on vertices v_{i-1} and v_i for $i=1, 2, \dots, n$.

② A simple path is a path with no repeated vertices.

③ (1, 2, 3, 1)

④ A cycle is a path of nonzero length from v to v with no repeated edges.

⑤ A simple cycle is a cycle from v to v in which, except for the beginning and ending vertices, that are both equal to v , there are no repeated vertices

⑥ (1, 2, 3, 1, 4, 5, 1) * repeated 1 in middle

Exercise 1-15 odd

① simple cycle

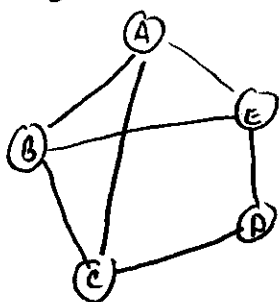
③ none

⑤ none

⑦ simple Path

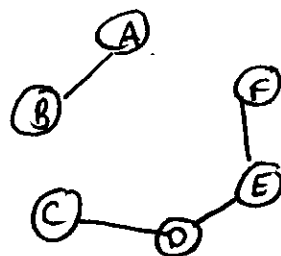
⑨ simple Path

⑪ 5 vertices of degree 3 each



not possible.
There must be an even number of vertices with odd degree

⑬ six vertices four edges



⑮ four vertices having degree 1, 3, 3, 4

