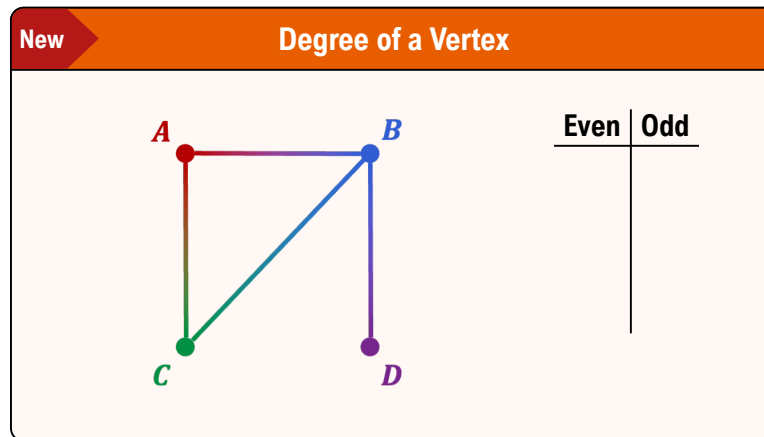


TOPIC: DEGREE OF VERTICES

Degree of Vertices

◆ The **degree** of a vertex is the number of _____ connected to that vertex (*loop adds 2*).



◆ To draw a graph with specific properties, start with the *total* number of vertices.

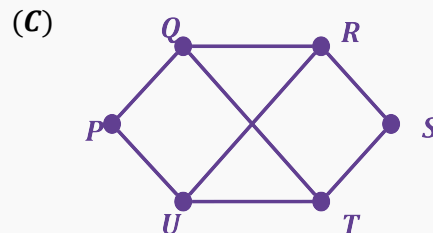
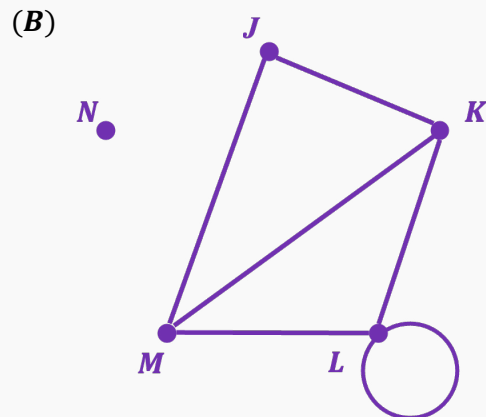
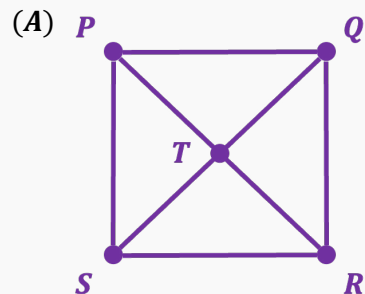
EXAMPLE

Draw a graph with exactly five vertices such that three vertices are even & two are odd.
Note: Many answers are possible. Label each vertex with its degree.

TOPIC: DEGREE OF VERTICES

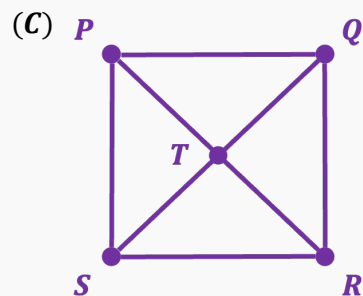
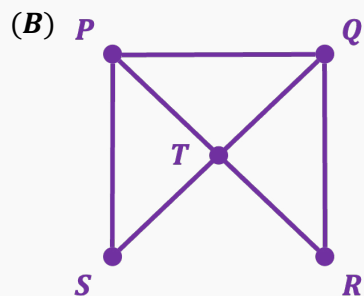
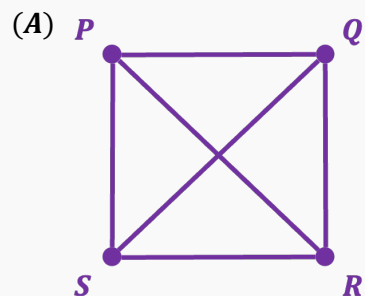
PRACTICE

Label the degree and parity (even/odd) of each vertex on each graph.



PRACTICE

Determine which graph fits the criteria: exactly five vertices and odd vertices.



PRACTICE

Graph G is composed of vertices H, I, J, K, L , and edges $HI, HJ, HK, IK, JK, JL, KL$.

(A) Which vertices are adjacent to vertex J ?

(B) Find the degree of vertex K .

TOPIC: DEGREE OF VERTICES

EXAMPLE

Draw a graph with order 5, two loops, & only even vertices. (💡 *Hint: order means # of total vertices*)
Note: many answers are possible. Label each vertex with its degree.

EXAMPLE

The graph below represents train routes between major European cities.

(A) How many cities are one train ride away from Milan (*degree*)?

(B) How many cities are one train ride away from Rome (*degree*)?

(C) Which cities (*vertices*) are one train ride away from
exactly 2 other cities (degree = 2)

