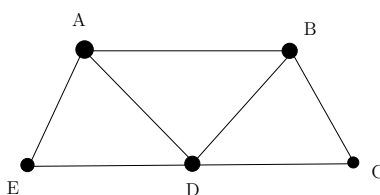


Homework 2

Math 118 section 004

Due: Friday, February 1st

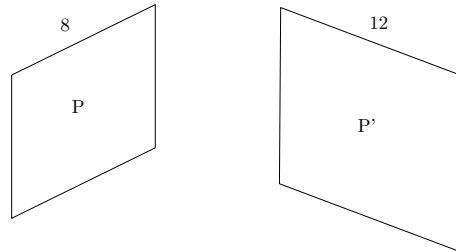
1. For the given graph, answer the following questions:



- Give the vertex set.
- Give the edge set.
- List the degree of all vertices.
- Is the graph connected?
- Does it possess an Euler Path or an Euler Circuit (or neither)?
- If so, give an example of one. If not, explain why.

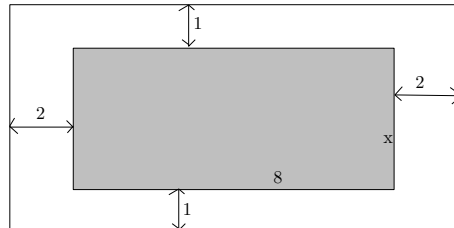
2. Answer the following questions for the graph defined by: $V = \{R, S, T, U, V\}$
 $E = \{RS, RT, SU, SV, VV, TU, TV\}$
- (a) Draw a representation of this graph.
 - (b) Find two different paths from V to T.
 - (c) What is the degree of each vertex?
 - (d) Does it have an Euler Path or an Euler Circuit (or neither)? Be sure to explain why or why not.

3. Suppose P and P' are similar.



- (a) If the perimeter of P is 20cm , what is the perimeter of P' ?
- (b) If the area of P is 50cm^2 , what is the area of P' ?

4. Find the value of x so that the unshaded region is a gnomon to the shaded region.



5. Find the value of y so that the unshaded region is a gnomon to the shaded region.

