Quiz 3 (Take-home)

Due Monday, 25 June 2018, in person by the end of class.

Score:

Work individually on this assignment. You must cite all uses of outside works; collaboration and the use of unauthorized materials are strictly forbidden.

Question 1 Draw examples of the following or explain why none exist:

- An acyclic graph of order 7 with 4 edges
- A 1-connected graph that is also 2-connected
- A 2-edge-connected graph that is also 1-edge-connected
- A tree T with the property $\kappa(T) < \lambda(T)$
- A graph G of order 5 such that $\lambda(G) = 4$
- A graph H such that $\kappa(H) = 1$ yet $\lambda(H) = 3$

You may use this sheet for work.

Question 2 Let G be the graph K_4 whose vertices are labelled with $\{1, 2, 3, 4\}$. How many spanning trees does $G - e$ contain, where e is the edge $\{2, 3\}$?

You may use this sheet or its reverse for work.