PS/Ec 172, Set 2
Due Friday, April 17ᵀᴴ

Collaboration on homework is encouraged, but individually written solutions are required. Also, please name all collaborators and sources of information on each assignment; any such named source may be used.

(1) *Subgame perfect equilibria.*
   (a) *10 points.* Find a subgame perfect equilibrium of the dollar auction extensive form game, as described in section 2.9 of the lecture notes.

   (b) *10 points.* Find an equilibrium of the centipede game for $n \geq 5$ that is not subgame perfect.

(2) *Equilibria in strategic form games.* Find all the equilibria in the following games, which are described in the lecture notes.
   (a) *10 points.* Prisoner's dilemma.

   (b) *10 points.* Stag hunt.

   (c) *10 points.* Bertrand competition.

   (d) *10 points.* Public goods.

   (e) *10 points.* Voter turnout when N^a and N^b are the same size.

   (f) *10 points.* Voter turnout when N^a is larger than N^b.

(3) *Cournot competition.* The Cournot competition game is described in the lecture notes.
   (a) *20 points.* Find a symmetric pure Nash equilibrium of the Cournot competition game, as described in Exercise 3.9 of the lecture notes.

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