Practice problems (don't turn in):

- 1. [DPV] Problem 7.1 and:

 Can you use the dual LP to prove it's optimal?
- 2. [DPV] Problem 7.4 (LP for Duff beer)
- 3. [DPV] Problem 7.5 (LP for canine products)
- 4. [DPV] Problem 7.6: Give an example of an LP with unbounded feasible region but bounded optimum.
- 5. [DPV] Problem 7.11 (dual to the example)
- 6. [DPV] Problem 7.12 (prove that point (1.5,.5,0) is optimal

Problem 1 Max-flow variants

[DPV] Problem 7.18 parts c and d (max-flow variants using LP)

Problem 2 Best fit line

[DPV] Problem 7.8 (best fit line)

By the way, do you know how to convert this LP into standard/canonical form? You don't need to do it for the HW submission but you should know how to do it in any case.

Solution:

Problem 3 Infeasible

For an infeasible LP, the dual LP is always feasible:

 $\begin{array}{ccc} \text{TRUE} & \text{or} & \text{FALSE} \end{array}$

If TRUE explain why it's true, and if FALSE give a counterexample.