|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 2x – y ≥ 0 | x + y ≤ 8 | x ≤ 2.5 | x ≥ 0 | y ≥ 0 |

1. Maximize 3x + 2y  
   Constraints:

TODO: image here

1. Yes, it is possible for a linear program in two variables to have an infinite feasibility region but also an optimal solution of bounded cost. It the feasibility region went from 0 to infinity in both x and y axis, and the goal was to minimize the cost.  
   TODO: example
2. Ring $30, 0.5 hours, $15 profit  
   Belt $40, 1 hour, $20 profit  
     
   Constraints, 10hrs, 15 accessories max  
   Maximize profits.
3. X
4. EXACT 4SAT
5. Proof: If A reduces to B and B reduces to C then A reduces to C.  
   eep, massage my inputs  
   Show that reduction is transitive. <https://www.britannica.com/topic/transitive-law>