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## Graded Assignment 3 - Softdrink production

### Production plan for softdrinks

3/3 points (graded)

Ina works in a juice firm and has to develop the production plan for the lemon and the orange juice concentrates. The fruits (lemon and orange) that she needs to make the juice are not the bottleneck but Ina is concerned about the other main ingredients that go into making the juice: a water-based solution, sugar, and a vitamin mix. Checking with the ERP system tells her that she has 9.3 metric tons of the water solution, 3.07 metric tons of sugar, and 1970 kg of vitamin mix. The recipe tells her to use 50 kg of water solution to make a metric ton of lemon drink and 73 kg of water solution to make a metric ton of orange drink. For the lemon drink she also needs 23 kg of sugar and 19 kg of vitamin mix. The orange drink needs 10 kg of sugar and 14 kg of vitamin mix.

From the sales department, Ina knows that the lemon soft drink sells at 58 SEK/metric ton and the orange drink sells at 70 SEK/metric ton.

How much lemon drink should Ina produce to maximize profit?

Give your answer in metric tons and round to one decimal place.



19.8

How much orange drink should Ina produce to maximize revenue?

Give your answer in metric tons and round to one decimal.



113.8

How much revenue can Ina generate with the optimal production plan?

Round your answer to the nearest integer and do not put any currency symbols in the answer field.



You have used 1 of 2 attempts

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✓ Correct (3/3 points)

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