HW 6 P & Q Given

Sunday, September 27, 2020 6:20 PM

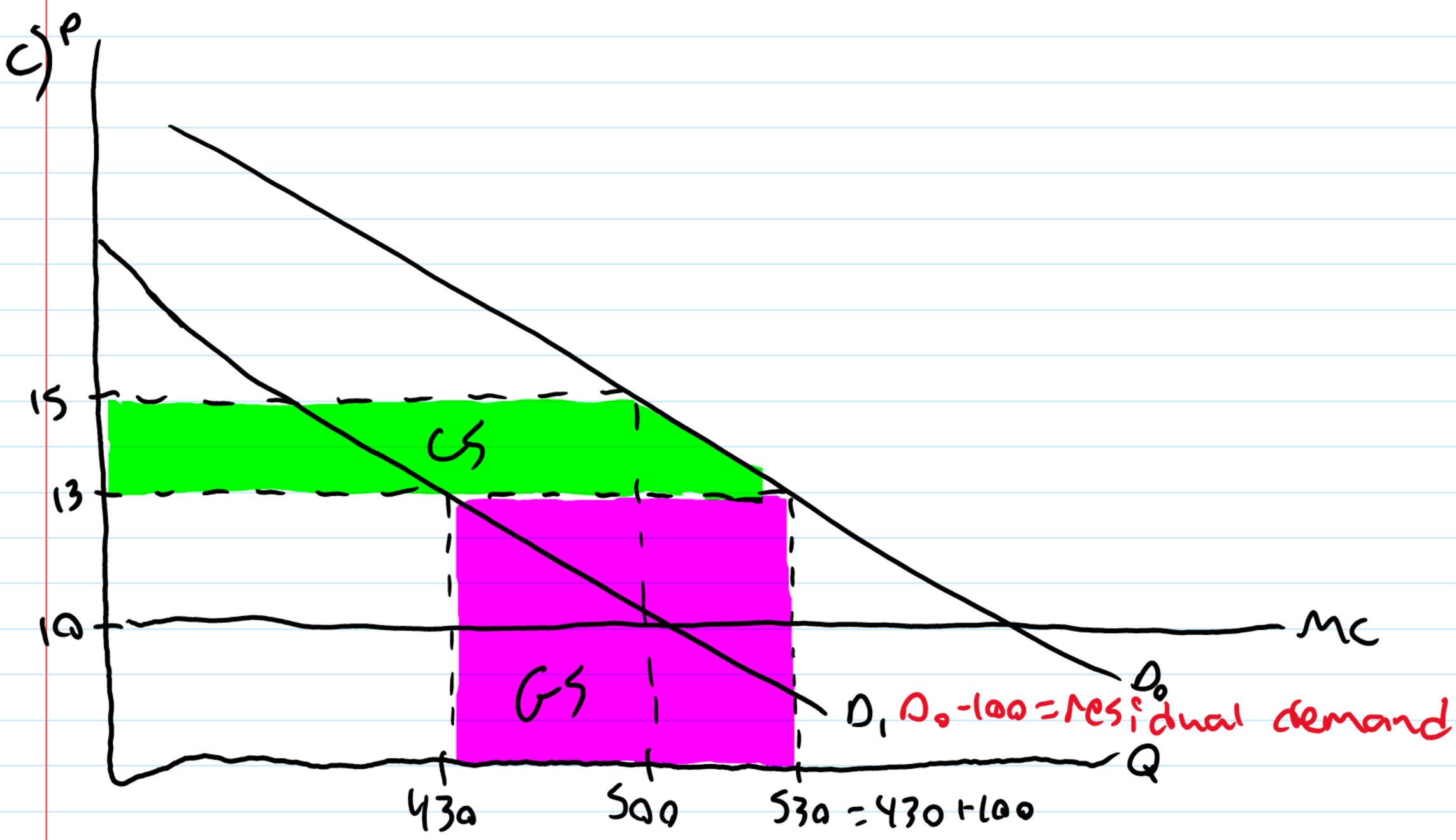
Worked w/ Austin
Passed Solution review

Initially, a profit maximizing local monopolist charges $15 and sells 500 units per week. Per unit variable cost is $10. Now assume the local government begins to provide 100 units per week at the market price. As a result, the market price falls to $13 and the quantity sold by the monopolist falls to 430.

a) Find the changes in CS, PS, and GS created by the monopoly.

b) Assume the METB is 0.25. Find the changes in SS.

c) Depict all of this in a diagram. You probably want to sketch the diagram right at the start of the problem for reference as you work, and then to redraw a neat version to submit.



a) $\Delta CS = (2 \cdot 500) + (\frac{1}{2} \cdot 2 \cdot 30)$
$= 1000 + 30$
$\Delta CS = \$1030$

$\Delta PS = (-1)(15-13)(500) - (500-430)(13-10)$
$= (-1 \cdot 2 \cdot 500) - (70 \cdot 3)$
$= -1000 - 210$
$\Delta PS = -1210$

$\Delta GS = (530-430)(13)$
$\Delta GS = 1300$

b) $\Delta SS = \Delta CS + \Delta PS + (1 + METB)(\Delta GS)$
$= 1030 - 1210 + (1.25 \cdot 1300)$
$= -180 + 1625$
$\Delta SS = 1445$