10. Incorrect. The answer is false not true. Only the monopoly profits are incorrect. The monopolist should produce where MR - MC - t = 0 118.75- 4Q - $3Q^2$ + 50Q - 200 -2 = $-3Q^2$ + 46Q - 83.250 = 0. Solving with the quadratic formula the two solutions are 2.10 and 13.24. 2^{nd} order conditions are -6*2.10 + 46 = 33.42 > 0 (min) and -6*13.24 + 46 = -33.42 < 0 (max). At the max, Q = 13.24, the price is $92.28 government revenues would be 2*13.24 = 26.47. Economic profits would be P*Q - TC -t*Q = 608.67 not the 635.15, which does not include a reduction for the tax. Social welfare = consumer surplus + producer surplus + tax = (118.75 - 92.28)*13.24*0.5 + 608.675 + 26.474 = 810.36.