

19. Incorrect. The answer is false not true. Solving for the optimal output:

$$\pi = TR - TC = 8*(12.5L - 0.125L^2) - 2L^2$$

$$\text{F.O.C: } d\pi/dL = 100 - 2L - 4L = 0 \Rightarrow$$

$$100 - 2L = 4L$$

Note that the expression on the left hand side of the equality is MRP, the expression on the right hand side is the marginal factor cost, and that the marginal factor cost is twice as steep as the supply curve or marginal cost curve.

Solving $L = 16.67$.

