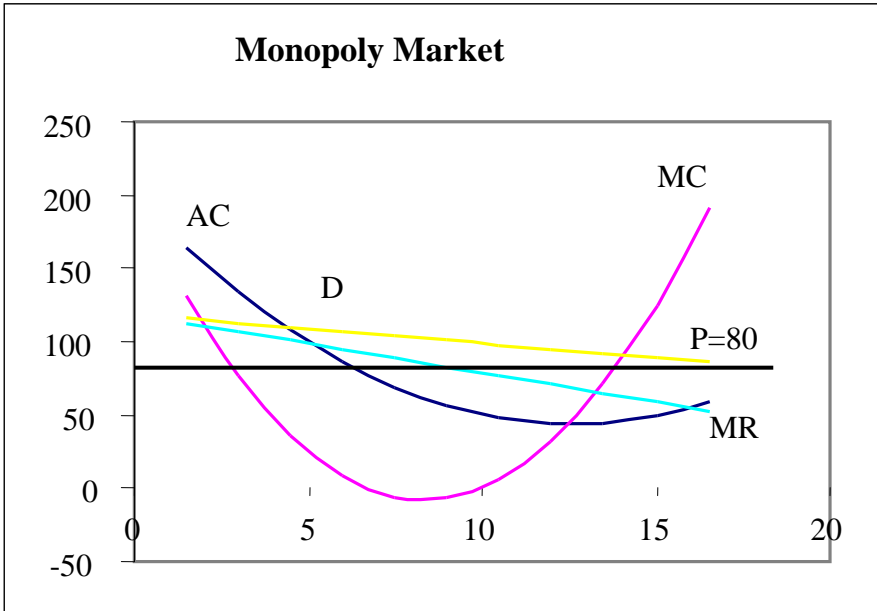


15. Correct. The answer is true.



The new marginal revenue curve is 80 until it hits the demand curve at $Q = 19.375$. To find the monopolist's Q at a price of 80, set $P = MC$ or $80 = 3Q^2 - 50Q + 200$. The quadratic formula gives 2 solutions to this problem. $Q_1 = 13.76$, $Q_2 = 2.91$. 2nd order conditions verify that Q_1 is the maximum. This Q is higher than the optimal Q in question 10 of 13.29. Q_d at this price would be $59.375 - 0.5 \cdot 80 = 19.375$. So there would be a shortage. See if you can tell from the diagram below at what prices the monopolist would produce less and at what prices the monopolist would go out of business.