

- 1.2) Profit maximizing condition is $MRP = MFC$, and since both product mkt. and factor mkt. are the perfect competition, the $MRP = VMP$ (because $MP \times MR = MP \times P$)
So, we can find MRP by the equation $MRP = MP \times P$.

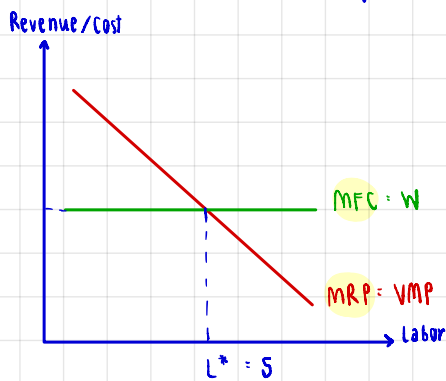
$$P = \$12$$

$$MFC = \frac{\Delta TFC}{\Delta L} = \frac{48}{1} = 48 = W$$

$$W = \$48$$

$$\therefore MRP = MFC = 48$$

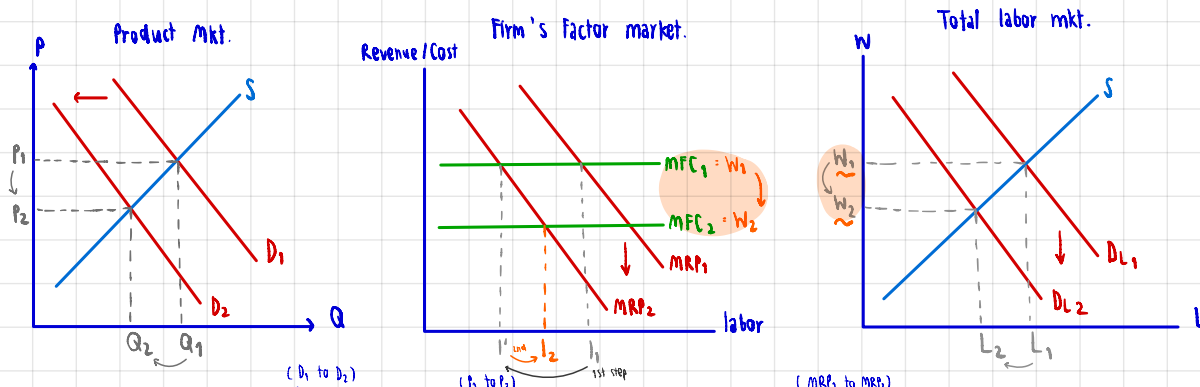
So, we get this table



Unit of labors	MP of labors	MRP (= VMP)	VMP (MP x P)
2	12	144	144
3	8	96	96
4	6	72	72
5	4	48	48
6	2	24	24

$\therefore$ In order to have $MRP = MFC = 48$, firm should hire 5 units of labors to maximize their profit. #

- 1.6) Economic recession driving consumers' purchasing power downward $\rightarrow$ product's demand decrease. (product demand shift left)



When product demand shift left, product price decrease (also MR decrease or shift down because it's perfect competition). This make firm demand less labor (from L_1 to L_2), effecting total labor demand in this industry decrease from D_{L1} to D_{L2} . Then decreasing demand for labor causes wage decrease from W_1 to W_2 , leading to an decrease in MFC (from MFC_1 to MFC_2), which makes firm's labor demand increase from L_2 to L_1 . To conclude, this recession makes firm hire less labor from L_1 to L_2 . #

$$2.a) \quad L = \frac{P - MC}{P} = \frac{1 - 0.2}{1} = 0.8 \quad \#$$

$$2.b) \quad HHI = \sum_{i=1}^N S_i^2 = (0.5)^2 + (0.2)^2 + (0.3)^2 = 0.25 + 0.04 + 0.09 = 0.38 \quad \#$$

$$2.c) \quad HHI = \sum_{i=1}^N S_i^2 = (0.5)^2 + (0.2 + 0.3)^2 = (0.5)^2 + (0.5)^2 = 0.25 + 0.25 = 0.50 \quad \#$$

3. a) Adverse selection, in order to maximize profit, firm set high price to prevent many claims from the high risk premium group. This is because firm don't have their customers' information, so price become the only tool for them.
3. b) Externalities (negative), because the loud sound from the other room that Morpheus was hearing is create negative effect or cost to Morpheus.
3. c) Not a market failure, because this can work as "the signaling" to remedy the moral hazard problem happening between the employee and the employer.
3. d) Public goods, earthquake alarming system is included in public goods, which have no private firm would invest in this business because it can't give any profit to the firms.
3. e) Market power, the higher Starbucks' coffee price could reflect on the higher Lerner's index ($L = \frac{P - MC}{P}$). And the more lerner's index : the more market power it has.