

PROFIT MAXIMIZING COMBINATION OF RESOURCES

P of Output = \$2/unit

$P_L = \$8/\text{unit}$

$P_C = \$12/\text{unit}$

Labor

Capital

(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
<u>Q of L</u>	<u>TP (Q)</u>	<u>MP</u>	<u>MRP</u>	<u>MRP_L/P_L</u>	<u>Q of C</u>	<u>TP (Q)</u>	<u>MP</u>	<u>MRP_C</u>	<u>MRP_C/P_C</u>
0	0	-	-	-	0	0	-	-	-
1	12	12	24	3.0	1	13	13	26	2.17
2	22	10	20	2.5	2	22	9	18	1.50
3	28	6	12	1.5	3	28	6	12	1.0
4	33	5	10	1.25	4	32	4	8	0.66
5	37	4	8	1.0	5	35	3	6	0.50
6	40	3	6	0.75	6	37	2	4	0.33
7	42	2	4	0.50	7	38	1	2	0.13

$MRP = P_L = 8, MRP/P_L = 1.0$

5 Units of Labor

Labor Cost = $5(8) = \$40$

$MRP = P_C = 12, MRP/P_C = 1.0$

3 Units of Capital

Capital Cost = $3(12) = \$36$

Output = $37 + 28 = 65$ units

TR = $\$2(65) = \130

Profit = $\$130 - 76 = \54