

Q1 and Q2 Allocate variable costs only

	Direct costs	
	Maintenance	Personnel
Costs	\$16,000	\$10,000
Output	400	500
Units	000 feet ²	Persons
Maintenance	0%	20%
Personnel	50%	0%
Assembly	10%	60%
Fabrication	40%	20%

Allocations
Do after computing full costs

	Full Costs	
	Maintenance	Personnel
	\$20,000	\$20,000
÷	400 ÷	500
	000 feet ²	Persons
	\$50	\$40
	\$0	\$4,000
	\$10,000	\$0
	\$2,000	\$12,000
	\$8,000	\$4,000

Rate

Total
\$14,000
\$12,000

Solve

FC Maintenance =	\$16,000 +	20% x	Cost Personnel
FC Personnel =	\$10,000 +	50% x	Cost Maintenance

\$20,000
\$20,000

FC Personnel = \$18,000 + 10% x Cost Personnel

Substitute

Q3 and Q4. Buy Maintenance Services from Outside

Personnel area will come down because now

Personnel needs to serve only	400	persons total in production departments
To serve	500	persons, Personnel area is 200 K feet ²
So, to serve	400	persons, Personnel area is 160 K feet ²
		Production area 200 K feet ²
		New Total area 360 K feet ²

New Personnel size Percent $400 \div 500 = 80.00\%$

Q3. Can not avoid fixed costs

	Old	With Mainten. outside	Reduction
Cost Maintenance	\$16,000	\$0	\$16,000
Cost Personnel	\$10,000	80.00% \$8,000	\$2,000
Total	\$26,000	\$8,000	\$18,000
Maximum rate for maintenance	\$18,000 ÷	360 =	\$50

Q4. Can avoid fixed costs

Total	\$18,000 +	\$ 18,000 =	\$ 36,000
Maximum rate for maintenance	\$36,000 ÷	360 =	\$100

Q5 Direct Method

	Maintenance	Personnel	
Variable	\$ 16,000	\$ 10,000	
Output	200	400	
Prodn only	K feet ²	Persons	
Rate	\$ 80	\$ 25	
Fabrication	\$3,200	\$7,500	Total
Assembly	\$12,800	\$2,500	\$10,700
			\$15,300