

E217: Inventory Management**Quiz for Problem P09 – Plan to Buy**

1. Analyze the given MRP results and answer the below questions.

Period (Weeks)	1	2	3	4	5	6	7	8
Gross Requirement	0	0	24	12	32	0	36	0
Projected On Hand	10	10	0	0	0	0	0	0
Net Requirement	0	0	14	12	32	0	36	0
Planned Order Receipts	0	0	14	12	32	0	36	0
Planned Order Releases	14	12	32	0	36	0	0	0
Lead time = 2 weeks								

a) Which is the lot sizing technique being used?

- a. LFL
- b. EOQ

b) How many orders needed over the 8 weeks?

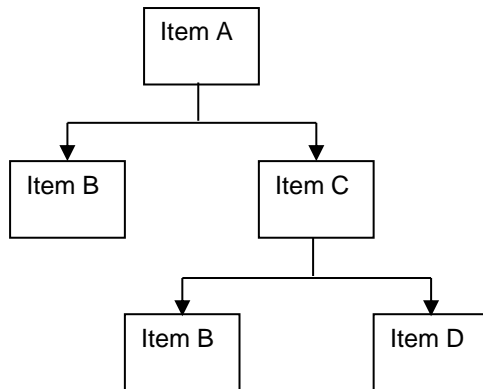
- a. 4
- b. 36
- c. 6
- d. 8

c) Suppose the on-hand inventory is 30 instead of 10. For this case, when do you need to issue your first order?

Period (Weeks)	1	2	3	4	5	6	7	8
Gross Requirement	0	0	24	12	32	0	36	0
Projected On Hand	30	30	30	6				
Net Requirement				6				
Planned Order Receipts				6				
Planned Order Releases		6						

- i. Week 3
- ii. Week 4
- iii. Week 2
- iv. Week 1

2. An end item "A" is assembled from two "B" components and two "C" subassemblies. The "C" subassembly is composed of one of each component "B" and "D."



(a) Which one is the independent demand item based on BOM of above product?

- i. **Item A**
- ii. Item B
- iii. Item C
- iv. Item D

(b) Which one is the dependent demand item based on BOM of above product?

- i. Item A
- ii. **Item B**
- iii. **Item C**
- iv. **Item D**

(c) Suppose the gross requirement for "A" is 100 units. For this case, what is the demand for component "B"?

- i. 200
- ii. **400**
- iii. 300
- v. 500

(d) We know that

- the manufacturing lead time for item "A" is 2 weeks,
- purchasing lead time for "B" components is 3 weeks,
- assembly lead time for "C" subassemblies is 1 week,
- purchasing lead time for component "D" 2 weeks,

When should you issue the purchase order for item D if you have planned the production for item A in week 6? Circle the correct answer.

- a. Week 0
- b. Week 1
- c. Week 2
- d. **Week 3**

Planned production order for A is issued at week 6 →

The planned production for C should be at week 5 → (1 week lead time)

The planned purchasing for D should also be at week 3 → (2 week lead time)