What is Throughput Accounting?

Worksheet

Throughput accounting measures profitability as Throughput = Sales Revenue Totally Variable Cost, then optimizes production around the bottleneck (constraint) to maximize it.

Questions

1. Selling price is $200, totally variable cost is $80. What is throughput per unit?

A) $280
B) $120
C) $160
D) $80

2. What does throughput accounting primarily aim to maximize?

A) Fixed costs
B) Direct labor hours
C) Throughput through the bottleneck
D) Total inventory

3. What is a bottleneck (constraint) in TOC?

A) The cheapest resource
B) The resource limiting overall system output
C) Any idle machine
D) The most automated process

4. If TAR (Throughput Accounting Ratio) is less than 1, what does it mean?

A) The product is highly profitable
B) The product doesn't cover its share of factory costs
C) There's no bottleneck
D) Costs are irrelevant

5. A product sells for $120 and has totally variable (material) cost of $45. What is throughput per unit?

6. The bottleneck machine has 400 minutes/day available. A product needs 5 minutes on the bottleneck and generates $75 throughput. What is throughput per bottleneck minute?

7. Factory costs (excl. materials) are $6,000/day and the bottleneck has 400 minutes available. What is the cost per bottleneck minute, and is a product needing 5 minutes/unit with $15/min throughput worth producing (TAR)?

8. Define: What is throughput in TOC?

9. Define: What is the goal of throughput accounting?

10. Define: What is a 'constraint' or 'bottleneck'?

Answer Key

1. B) $120 - T = SP TVC = 200 80 = $120.

2. C) Throughput through the bottleneck - TOC-based throughput accounting maximizes throughput generated through the constraint.

3. B) The resource limiting overall system output - The bottleneck is the resource that caps total system throughput.

4. B) The product doesn't cover its share of factory costs - TAR < 1 means throughput per minute is less than cost per minute - a loss on the constraint.

5. T = SP TVC T = 120 45 = $75 per unit

6. Throughput per bottleneck minute = Throughput per unit bottleneck minutes per unit = 75 5 = $15 per minute

7. Cost per bottleneck minute = 6,000 400 = $15/minute TAR = Throughput per minute Cost per minute = 15 15 = 1.0 TAR = 1 means breakeven; TAR > 1 is profitable

8. Throughput = Sales Revenue Totally Variable Cost (mainly direct materials).

9. Maximize throughput through the system's bottleneck, not just minimize cost.

10. The resource that limits the whole system's output - the slowest link in the chain.