

(R,Q) Parameters

 “order Q whenever inventory reaches R”

- Set **Q** as the EOQ solution
- Set **R** as the newsboy solution:

$$P(\text{DDLT} < R) = \alpha$$

where α is a desired service level (e.g. 95%)

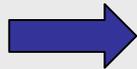
DDLT = Demand During Lead Time

Example (cont'd): if weekly demand for 128Mb chips is in fact $N(400,80)$ and delivery time is 2 weeks, for a 95% service level:

$Q = 1,013$ units (as before),

$R = E[\text{DDLT}] + 1.65 \times \sigma[\text{DDLT}] = 800 + 1.65 \times \text{sqrt}(2) \times 80 = 986$

(S,T) Parameters



“order back to S every T time units”

- Set **T** as the EOQ solution divided by the demand rate
- Set **S** as the newsboy solution:

$$P(\text{DDLTRP} < S) = \alpha$$

where:

- α is the desired service level (e.g. 95%)
- DDLTRP = Demand During Lead-Time and Review Period

Example (cont'd): For the 128Mb chips example (from slides 12 & 23):

$$\begin{aligned} T &= Q / D = 1,013 / 400 = 2.5 \text{ weeks,} \\ S &= E[\text{DDLTRP}] + 1.65 \times \sigma[\text{DDLTRP}] \\ &= (400 \times 4.5) + 1.65 \times \text{sqrt}(4.5) \times 80 = 2080 \text{ units} \end{aligned}$$