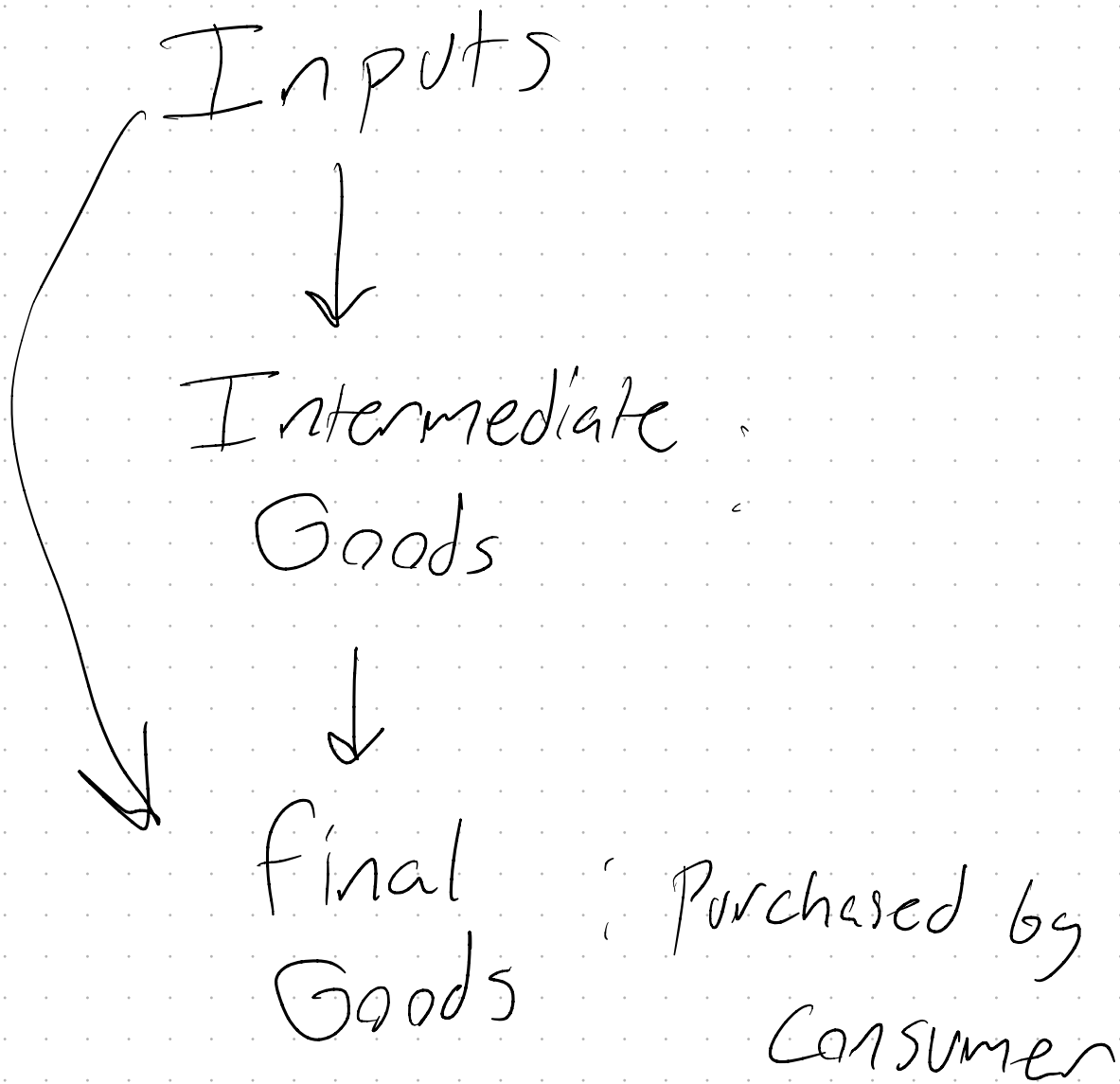


Ch 6: Production



Simplifying Assumptions

- Firm produces a single good
- 2 inputs: Labor & Capital
- Short run: Capital is fixed
- Long run: all inputs are variable
- more inputs \Rightarrow more outputs
 $MP_L > 0 \quad \forall L$
- Diminishing marginal returns to labor & capital
 $\frac{\partial^2 Q}{\partial L^2} < 0 \quad \forall L \quad \frac{\partial^2 Q}{\partial K^2} < 0 \quad \forall K$
- Price of inputs are fixed

Objective:

To produce a given quantity
as inexpensively as possible.



Constrained optimization

Production Function

$$Q = f(K, L) = K^{.5} L^{.5}$$

capital labor

Cost Minimization Problem

- Isoquants (like indifference curves)
 q

Same quantity

