

Behind the Supply Curve: Inputs and Costs

Learning Objectives

- How the firm's production function relates quantity of inputs to quantity of outputs
- Diminishing returns to inputs
- The types of costs and their graphs
- Why cost may differ in the short run versus the long run
- Technology and returns to scale

The Production Function

I.

A.

B.

II.

A.

B.

III.

IV.

A.

B.

V.

A.

B.

C.

1.

2.

quantity of pizza



Labor

MPL



Labor

Costs and Cost Curves

I.

A.

B.

C.

II.

A.

B.

C.

D.

III.

A.

B.

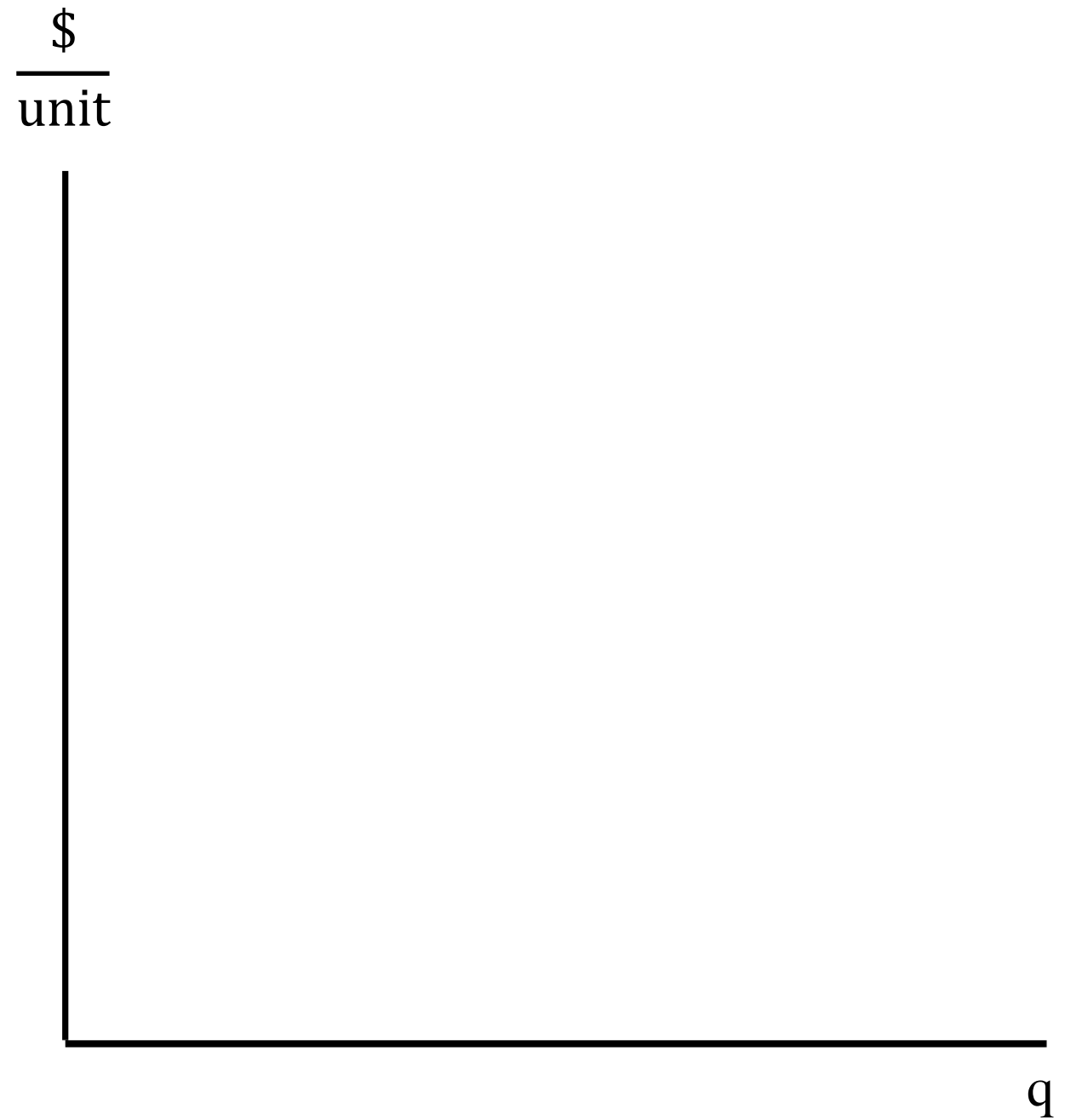
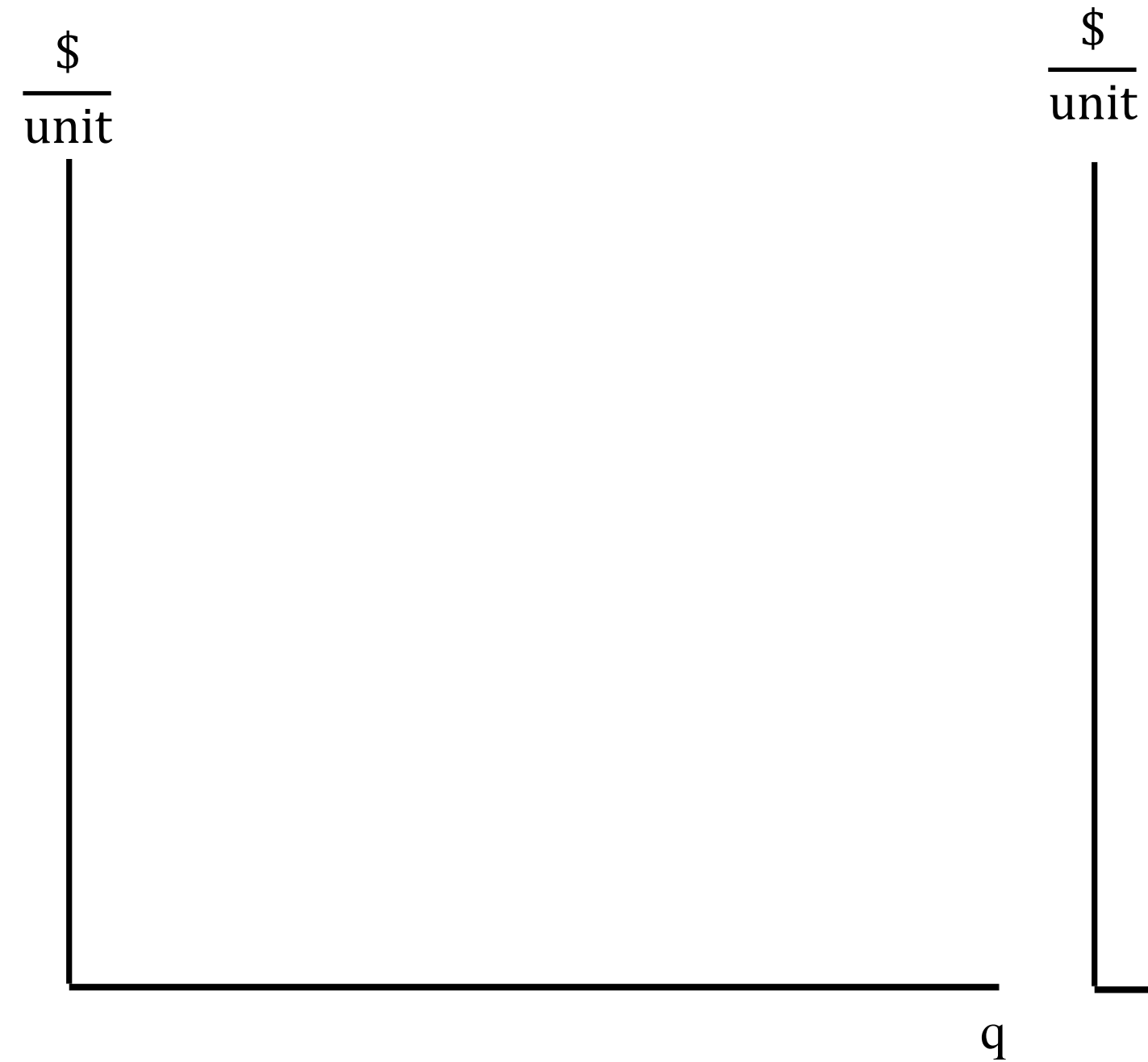
C.

IV.

A.

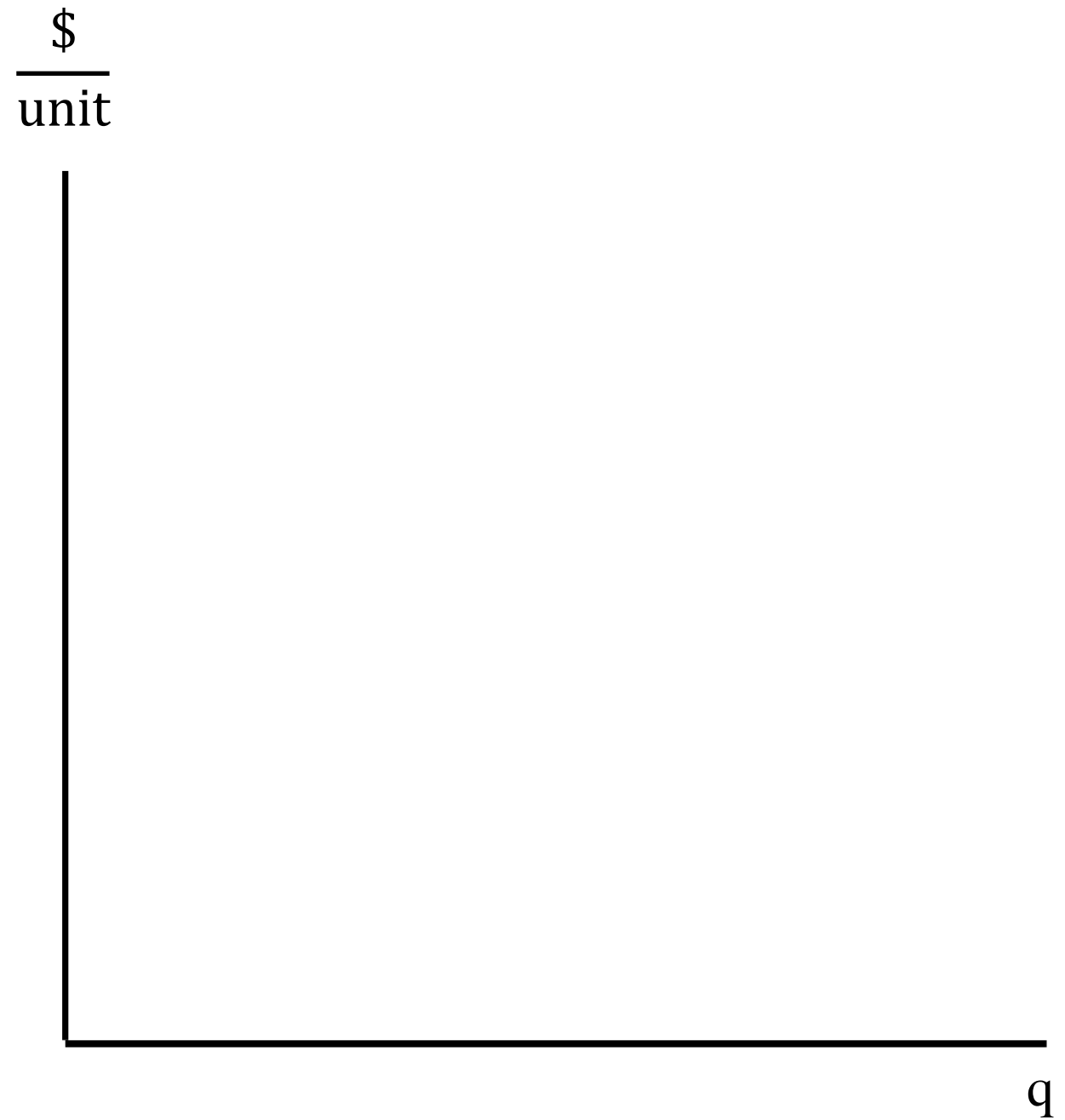
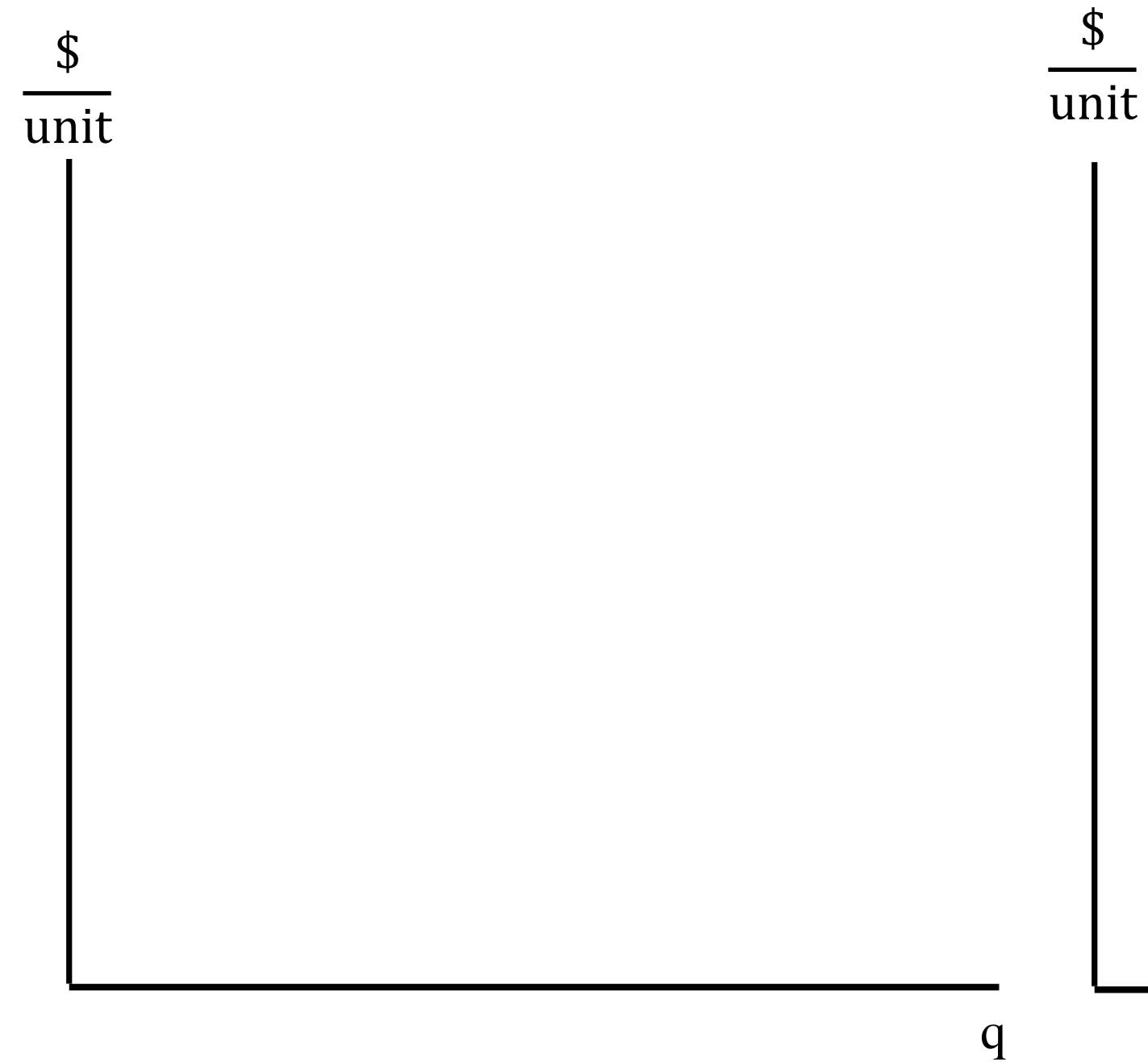
B.

C.



Short-Run versus Long-Run Costs

- I.
 - A.
 - 1.
 - B.
 - 1.
- II.
 - A.
 - B.
 - 1.
- III.
 - A.
 - 1.
 - B.
 - C.
 - D.



$\frac{\$}{\text{unit}}$

q

The Cost Table

Mom and Pop Pizza Production Function								
L	Pizza	FC	AFC $\frac{FC}{Q}$	VC	AVC $=\frac{VC}{Q}$	TC	ATC $=\frac{TC}{Q}$	MC $=\frac{\Delta TC}{\Delta Q}$
0	0							
1	5							
2	12							
3	18							
4	23							
5	27							
6	30							
7	32							
8	33							