

1. Characteristics of a perfectly competitive market:
- large # of small independent sellers
  - " " " " " buyers
  - homogeneous product
  - insignificant barriers to entry and exit
  - perfect information

Personal computers - small # of sellers, differentiated product  $\Rightarrow$  not perfectly competitive

Lettuce - all five characteristics are satisfied  $\Rightarrow$  perfectly competitive

Cable TV - one seller  $\Rightarrow$  not perf. comp.

Retail clothing stores - differentiated product  $\Rightarrow$  not perf. comp.

2.  $\Pi_{\text{daily}} = 50 (\$2 - \$1.80) = \$10 \times 30 \text{ days} = \$300.$

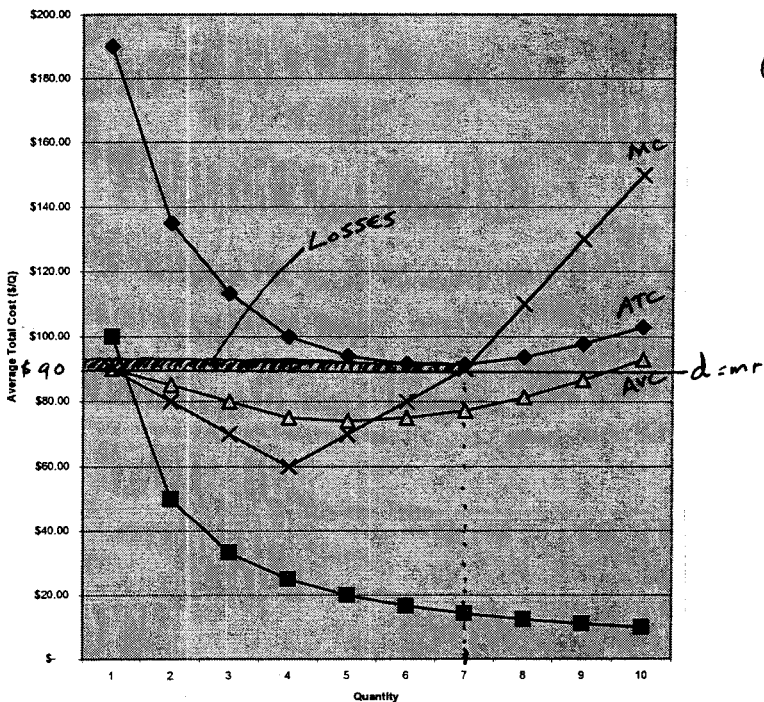
The \$400 fee that she has already paid is a SUNK COST, so she should continue to sell ice cream bars until her business license expires. Unless she expects things to improve, however, she should not renew her license, because looking forward she could expect to lose \$100 if she did this again next month.

3.

Q	TC	TFC	TVC	ATC	AFC	AVC	MC
0	\$ 100.00	\$ 100.00	\$ -				
1	\$ 190.00	\$ 100.00	\$ 90.00	\$ 190.00	\$ 100.00	\$ 90.00	\$ 90.00
2	\$ 270.00	\$ 100.00	\$ 170.00	\$ 135.00	\$ 50.00	\$ 85.00	\$ 80.00
3	\$ 340.00	\$ 100.00	\$ 240.00	\$ 113.33	\$ 33.33	\$ 80.00	\$ 70.00
4	\$ 400.00	\$ 100.00	\$ 300.00	\$ 100.00	\$ 25.00	\$ 75.00	\$ 60.00
5	\$ 470.00	\$ 100.00	\$ 370.00	\$ 94.00	\$ 20.00	\$ 74.00	\$ 70.00
6	\$ 550.00	\$ 100.00	\$ 450.00	\$ 91.67	\$ 16.67	\$ 75.00	\$ 80.00
7	\$ 640.00	\$ 100.00	\$ 540.00	\$ 91.43	\$ 14.29	\$ 77.14	\$ 90.00
8	\$ 750.00	\$ 100.00	\$ 650.00	\$ 93.75	\$ 12.50	\$ 81.25	\$ 110.00
9	\$ 880.00	\$ 100.00	\$ 780.00	\$ 97.78	\$ 11.11	\$ 86.67	\$ 130.00
10	\$ 1,030.00	\$ 100.00	\$ 930.00	\$ 103.00	\$ 10.00	\$ 93.00	\$ 150.00

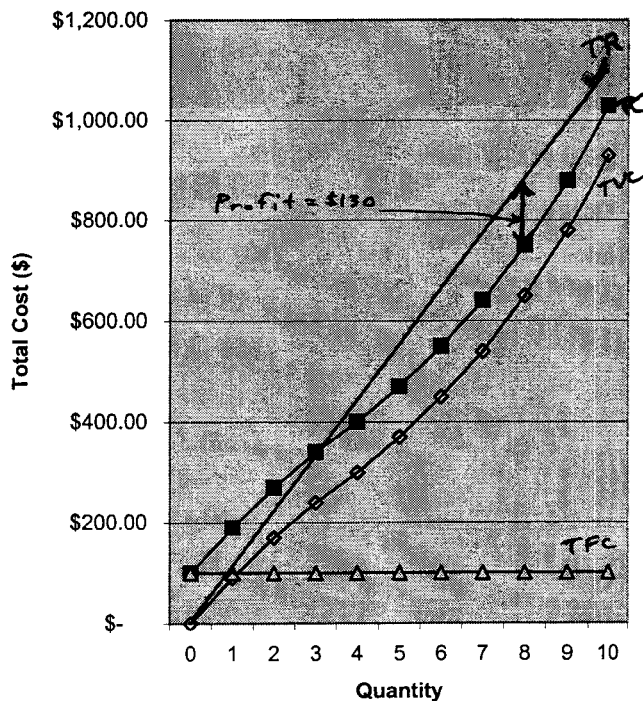
(a) if  $P = \$70$ , then  $P < AVC$  for all  $Q > 0$ . Shut down!  
 $Q = 0, \pi = -TFC = -\$100.$

b)



if  $P = \$90$ , then produce  
 $Q > 0$  where  $MR = MC$ .  
 $Q = 7, \pi = \$630 - \$640 = -\$10$ ,  
 See the shaded area above.

(c)



if  $P = \$110$ , then produce  
 $Q > 0$  where  $MR = MC$ .  
 $Q = 8, \pi = \$880 - \$750 = \$130$   
 See vertical distance  
 between TR and TVC above.

4. See ECO 401 Spring 2003 2nd Test Question #8  
 on my web site for the answer key.