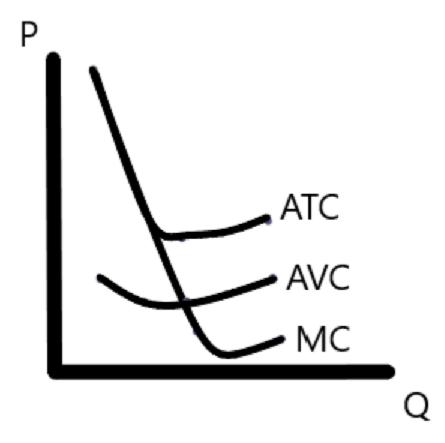
1.

a.

| Quantity of Labor | Quantity of Sweatshirts | Fixed Cost | Variable Cost | Total Cost | Average Fixed Cost | Average Variable Cost | Average Total Cost | Marginal Product of Labor | Marginal Cost |
|-------------------|-------------------------|---------------|------------------|---------------|--------------------------|-----------------------------|--------------------------|---------------------------------|------------------|
| 0 | 0 | 2000 | 0 | 2000 | - | - | - | - | - |
| 1 | 300 | 2000 | 1000 | 3000 | 6.67 | 3.33 | 10 | 300 | 10 |
| 2 | 800 | 2000 | 2000 | 4000 | 2.5 | 2.5 | 5 | 500 | -5 |
| 3 | 1200 | 2000 | 3000 | 5000 | 1.67 | 2.5 | 4.17 | 400 | -0.83 |
| 4 | 1400 | 2000 | 4000 | 6000 | 1.43 | 2.86 | 4.29 | 200 | 0.12 |
| 5 | 1500 | 2000 | 5000 | 7000 | 1.33 | 3.33 | 4.66 | 100 | 0.37 |

b.



c. The most efficient production level is at an output of 1200 sweatshirts

2.

a.

Accounting profit = \$45,600 Economic profit = -\$17,400

b.

You should not open the store because the economic profit is negative

3.

a.

| Q | FA-TC | FA-ATC | Q | FB-TC | FB-ATC | Q | FC-TC | FC-ATC |
|---|-------|--------|---|-------|--------|---|-------|--------|
| 1 | 60 | 60 | 1 | 11 | 11 | 1 | 21 | 21 |
| 2 | 70 | 35 | 2 | 24 | 12 | 2 | 34 | 17 |
| 3 | 80 | 26.67 | 3 | 39 | 13 | 3 | 49 | 16.33 |
| 4 | 90 | 22.5 | 4 | 56 | 14 | 4 | 66 | 16.5 |
| 5 | 100 | 20 | 5 | 75 | 15 | 5 | 85 | 17 |
| 6 | 110 | 18.33 | 6 | 96 | 16 | 6 | 106 | 17.67 |
| 7 | 120 | 17.14 | 7 | 119 | 17 | 7 | 129 | 18.43 |

Firm A experiences Economies of Scale, both Firm B and Firm C experience Diseconomies of Scale

b. I would choose Firm B if I had to produce 3 units because Firm B has the lowest Average Total Cost

4.

a.

| Q | FC | VC | TC | AFC | AVC | ATC | MC | MS |
|---|----|----|----|------|------|------|----|-----|
| 0 | 5 | 0 | 5 | ı | ı | ı | 1 | 0 |
| 1 | 5 | 5 | 10 | 5 | 5 | 10 | 5 | 100 |
| 2 | 5 | 8 | 13 | 2.5 | 4 | 6.5 | 3 | 200 |
| 3 | 5 | 13 | 18 | 1.67 | 4.33 | 6 | 5 | 300 |
| 4 | 5 | 20 | 25 | 1.25 | 5 | 6.25 | 7 | 400 |
| 5 | 5 | 29 | 34 | 1 | 5.8 | 6.8 | 9 | 500 |
| 6 | 5 | 40 | 45 | 0.83 | 6.67 | 7.5 | 11 | 600 |

b.

| Price | Quantity Demanded | Market Supply |
|-------|-------------------|---------------|
| \$12 | 300 | 300 |
| 10 | 500 | 500 |
| 8 | 800 | 800 |
| 6 | 1200 | 1200 |
| 4 | 1800 | 1800 |

c. Market price = \$10, profit = \$5000