

Citywide spirits shoppe essay sample

[Economics](#)



**ASSIGN
BUSTER**

1. Average profit for the additional hour from 10pm to 12pm = contribution margin*average customers*360 business days per year - \$20 clerks salary per hour*360 days
2. Average profit for the additional hour from 12pm to 4am = contribution margin*average customers*360 business days per year - \$30 clerks salary per hour*360 days
3. Real profit for the additional hour from 10pm to 12pm = contribution margin*real fact customers*360 business days per year - \$20 clerks salary per hour*360 days
4. Real profit for the additional hour from 12pm to 4am = contribution margin*real fact customers*360 business days per year - \$30 clerks salary per hour*360 days
5. Total profit before midnight= total numbers of customer*contribution margin*360days - \$20 clerks per hour*total hours before midnight*360 days
- 6 Total profit before midnight= total numbers of customer*contribution margin*360days - \$20 clerks per hour*total hours before midnight*360 days - \$30 clerks per hour*total hours after midnight*360 days

average customer

profit

real customer

profit

Time

Total profit

10pm~11pm

19390. 75

10pm~11pm

24206. 4

10pm~11pm

24194. 33

11pm~12pm

19181. 38

11pm~12pm

18961. 94

10pm~12pm

40540. 08

12pm~1am

14613. 01

12pm~1am

10129. 55

10pm~1am

45437. 25

1am~2am

13792. 23

1am~2am

7513. 361

10pm~2am

47718. 22

2am~3am

12902. 72

2am~3am

4897. 166

10pm~3am

47383. 00

3am~4am

11987. 05

3am~4am

2280. 972

10pm~4am

44431. 58

Based on the question of the time that Citywide Spirits Shoppe should choose to maximize profits, from the form we can see that at 11pm has the maximize profit of all the others in hourly, but for total profit for all hours which is close at 2am has the best profit of all others. Overall, Citywide Spirits Shoppe should choose 2am as the best time to close the store because of they have the maximize profit at that time and especially has the maximize profit even though after invest the better security system which is \$21, 000 The increase profit = real fact customer profit - average customer profit (This is what they expect profit they want to have based on the information in the attachments) The increase of total profit = total profit of a hour after - the hour before Increase in profits

profit

Time

Increase in total profit

10pm~11pm

4815. 648

10pm~11pm

24194. 33

11pm~12pm

-219. 432

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10pm~12pm

16345.75

12pm~1am

-4483.46

10pm~1am

4897.17

1am~2am

-6278.87

10pm~2am

2280.97

2am~3am

-8005.55

10pm~3am

-335.22

3am~4am

-9706.08

10pm~4am

-2951.42

As we can see through this from that only close before 11pm that the profit is positive that the real fact profit is greater than what they expect to in hourly, but for all hours as we can see from the form that have showed, the total increase in profit is positive close before 2am which means they are earning money before 2am, and the total profit become decrease after 2am which means they are losing money after 2am. Overall again 2am would be the best time to close the store for Citywide Spirits Shoppe.

Question 5

a. Calculate the breakeven number of additional customers for each added hour of operation up to 4am. Before midnight: The marginal cost = \$20 per hour, Breakeven = $\$20/\7 (contribution margin) \square 3. Breakeven number of additional customers = 3 After midnight: The marginal cost = \$30 per hour, Breakeven = $\$30/\7 (contribution margin) \square 5. Breakeven number of additional customers = 5

Break-Even Number is the number of units that must be sold in order to produce a profit of zero which means that the company will not lose any money and gaining money at the breakeven point. Through the calculation as we see that the breakeven number of additional customers for each added hour before midnight have to at least 3 customers have to make purchased, so the breakeven number is 3 before midnight and also the breakeven number will be 5 after midnight. b. Calculate the breakeven number of additional customers for an entire year, assuming (i) a closing time of 4am and then (ii) your recommended closing time, if it differs from 4am. Before midnight: The marginal cost = \$20 per hour*360 days = \$7200, Breakeven = $\$7200/\7 (contribution margin) \square 1029. Breakeven number of additional customers = 1029

After midnight: The marginal cost = \$30 per hour*360 days = \$10800, Breakeven = $\$10800/\7 (contribution margin) \square 1543. Breakeven number of additional customers = 1543

Through the case that it saying CSS need to invest a better security system which cost \$21, 000 for seven year so that it will bring out another marginal cost of security system which is \$3, 000 per year. Because of that it didn't

say when the store will keep the security system on for the business, working hours? Evening hours? 24 hours? Or also have it on during holidays too, so we will calculate the total breakeven number for the entire year with the marginal cost of security system Total breakeven number of closing at 4am = $(\$7200*2+\$10800*4+\$3,000)/\$7 \approx 8658$ Breakeven number of additional customers = 8658

Total breakeven number of closing at 2am (recommended) = $(\$7200*2+\$10800*2+\$3,000)/\$7 \approx 5572$ Breakeven number of additional customers = 5572

Through the calculation as we see that the total breakeven number of additional customers for all added hour before 4am for the entire year have to at least 8229 customers have to make purchased, so the breakeven number is 8229 before 4am for the entire year and also the breakeven number will be 5143 before 2am which is the time that I have recommended.

c. Find the safety margin on new customers for the year. (close at 2am)

Safety margin = expected number of added customers - breakeven number of added customers = $47718.22/\$7 - 5572 = 6816.8885714 - 5572 \approx 1245$