APPLE IPOD TOUCH 5TH GENERATION

How to Maximize the Revenue?

SURVEY

After surveying everybody that we need to know, we can determine that the adults that we have asked have typically the same amount of information as everyone else in Michigan. Since we have a varied amount of answers from different people, we strongly believe that we are able to conclude what we should improve on for our product to make it better for everyone.

✱1. **What feature do you like in the iPod touch 5th generation?**
- ◯ New Colorful Design
- ◯ 4 inch Retina Display
- ◯ iSight Camera
- ◯ New Earpods
- ◯ New Features of iOS6

2. **Does the number of GB determines whether or not you purchase the product?**
- ◯ Yes
- ◯ No

3. **Do you determine whether or not to buy this product by the price?**
- ◯ Yes
- ◯ No

4. **Would you buy an iPod touch with 64 GB for $250?**
- ◯ Yes
- ◯ No

5. **Would you buy the accessories or prefer them free? Ex. case, headphones, etc.**
- ◯ Buy
- ◯ Free

6. **Would you like a free case with every iPod you buy?**
- ◯ Yes
- ◯ No

7. **How did you find out about the new iPod?**
- ◯ Advertisement
- ◯ Apple Website
- ◯ News
- ◯ Friend/Family
- ◯ Other

8. **Would you buy another Apple product after your experience with this one?**
- ◯ Yes
- ◯ No

RESULTS

People Surveyed

1. Ms. McCabe: 9th grade English

2. Mr. Coughlin: 8th grade Math

3. Mr. Davidson: 9th grade Math

4. Ms. Bradley: Technology teacher

5. Ms. Cassidy: Art teacher

6. Mr. Uddin: 10th grade Math

7. Ms. Leena: Parent Pro

Survey Results:
1.   A- 2 B- 2 C- 1 D- 0 E- 2
2.   Yes- 4 No- 3
3.   Yes- 6 No- 1
4.   Yes- 3 No- 4
5.   Yes- 1 No- 6
6.   Yes- 7 No- 0
7.   A- 5 B- 0 C- 0 D- 1 E- 1
8.   Yes- 5 No- 2

WORD PROBLEM

The Apple iPod company in Michigan sells about 400 iPods per month at a price of $400. They decided to decrease the price of the iPods to gain more customers. For every $100 decrease in price, about 50 more iPods per month are sold. What price produces the maximum revenue?

SOLUTION

Equation: (400-100x) (400+50x)

$y = -5{,}000x^2 - 20{,}000x + 160{,}000$

X= -2
Y= 180,000

We will maximize the revenue by having the company pay $2 for every iPod bought so that the iPod case would be free and the maximum revenue would then equal $180,000 with the equation.

$$(400 - 100x)(400 + 50x)$$

$$160{,}000 - 5000x^2 - 40{,}000x + 20{,}000$$

$$y = -5000x^2 - 20{,}000x + 160{,}000$$

$$x = \frac{-b}{2a} \quad \frac{-(-20{,}000)}{2(-5000)} \rightarrow \frac{20{,}000}{-10{,}000} \rightarrow x = -2$$

$$y = -5000(-2)^2 - 20{,}000(-2) + 160{,}000$$

$$y = -20{,}000 + 40{,}000 + 160{,}000$$

$$y = 180{,}000$$

$$x = -2 \quad \text{and} \quad y = 180{,}000$$