(For code, graphs and insights, see Ex.html)

a)

If given $60000 to spend on online campaigns, I would decide to allocate $40500 in SMS advertising and $19500 in Email advertising. The reasons for the decision to invest more in SMS than emails are as follows:

1. Although emails attract more purchases than SMS, the difference is not significant enough to make up for the higher cost to run an email advertisement.
2. There are a huge number of receivers who stopped at the payment page after clicking onto SMS. This implies that there are a lot of potential customers that we need to exploit from this category.
3. An SMS advertisement generates more profit than an email advertisement on average for all kinds of coupons.
4. The 46-60 age group, which has the highest chance of converting a click to a purchase, mostly make a payment after clicking onto SMS advertisements.

With $19500 in Email advertising, we can send a total of 260000 emails. I would allocate all 260000 emails into the 31-45 age group. This age group has the highest number of payments made from email clicks. Allocating all emails into this group will make full use of its high interest in purchasing from emails.

With $40500 in SMS advertising, we can send 810000 SMS. I would allocate 90000 SMS into the 31-45 age group to fill up the pool size for this group, 300000 SMS into the 18-30 age group to fill up the pool size as well, and the remaining 420000 SMS into the 46-60 age group. The high amount of SMS being sent to the 46-60 age group makes sense in my opinion. Because this group has the highest chance of converting a click into a purchase unit, implying it is the one with the highest potential to bring more razor consumers to the company. The reason for filling up the pool size for both 18-30 and 31-45 age groups is because I think these 2 age groups would still remain the high amount of purchase units for the company. There is no investment in targets older than 60 years old as the data has shown that this age group has almost no interest in making a purchase regardless of whether they receive an email or SMS.

b)

If given the chance to operate the company's website, I would suggest the following changes:

1. Suspend advertisements that are being sent to targets older than 60 years old. We might not want to spend money on the customer pool that is too unlikely to bring us profit.
2. As we are losing quite a huge amount of potential customers from the 18-30 age group, I would suggest doing a customer survey on this group to understand why most of them decided to stop at the payment page. After that, design the next step based on the survey's result. For example, if we receive a lot of feedback saying that they require more recognition in our advertisements, we should consider hiring an influencer or a celebrity whose age is between 18 and 30 to advertise our product.
3. Remove coupons with the value of $6. This is due to the fact that coupons with value of $6, in this case, are not as profitable and attractive as we expected from a coupon type with high discount value. In addition, the coupon types with values of $2 and $4 are doing quite better in encouraging our customers to buy razors.
4. Analyze further on why there are a huge amount of SMS and emails being ignored although they were sent successfully. For example, remove any words/images that could potentially categorize the SMS or emails as spam or misleading, making them unable to be seen by the targeted customers.