Big Mountain Resort's current adult weekend price is $81. After completing regression analysis on figures we have about significant features and competitor's ticket prices, I've arrived at a modelled price for Big Mountain Resort is $95.87, with an expected mean absolute error of $10.39. This means we're substantially undercharging for tickets.

From our predictive analysis, we found the following features to be the most impactful in determining ticket prices: vertical drop, snow-making area, total number of ski chairs, number of fast quads, and longest run.

We've based our ticket prices on market averages, previously. Our facilities and features of value rank among the best, nearly across the board. But our prices aren't substantially different from the median prices of all ski lodges. If we were using market averages before, it likely is the case our average was brought down by a market with a fairly irregular distribution. An irregularly high number of lodges charge around $45 and $55 dollars per ticket, which would considerably bring down the market average. Our current price is somewhat above the median, but not nearly to the extent by which we out rank other lodges' features. The model proves its value in this respect alone -- namely it shows that basing prices off market averages itself devalues our appealing features. Additionally, market data show people will pay more for certain facilities and features, which we have in abundance.

We looked at a number of different scenarios for cutting costs or increasing revenue. Of these, I suggest we look to add a run, increase vertical drop by 150 feet, and install an additional chairlift (which we planned to do, regardless). With these changes Big Mountain can raise ticket prices by $8.61, to $89.61. This price is comfortably in the range of error of the projected $95.87 model price. Assuming each visitor buys 5 day tickets, this could be expected to amount to $15,065,471 over our operating season. This more than covers our increase in operating costs from the additional chairlift (estimated at $1,540,000).

If we needed to look at *closing* runs, I'd like to point out an interesting pattern we've noticed. Closing runs works in a tiered system (i.e., closing one run won't make a difference to profits, but closing two should decrease expected ticket price by around $.50, and closing between 3 - 5 will lower prices by about $.75. Anticipated loss to revenue would be about $0, $.75, and $1.25 per ticket, respectively. Given that, if runs needed to be closed, fewer is certainly better. But if at

least 3 need to be closed, we'd have flexibility to close two more with no impact to projected profit.

Future improvements to this model would be supported by access to data about visitor counts, rather than projected sums. This would give us yet another data point we could model -- either as a predictive goal or in understanding its predictive relationship with ticket prices.