ANSWER SHEET SUMMARY

Ques 1:

Intercept: 10.88 Interpretation: Average value of logSales in absence of predictors

Slope: 0.037 Interpretation: Effect of Month on Sales

Ques 2:

Statistic 1: R Squared = 83.67% Interpretation: Percentage of variance in Y explained by X

Statistic 2: RSE: 0.3342 Interpretation: On average predictions are off by 33.42%

Ques 3:

Test of L: Not Satisfied

Test of I: Not Satisfied

Test of N: Satisfied

Test of E: Satisfied

Ques 4:

Change in SS: 1.5

Value of LR: 15.741

p-value for LR: 0.151

Decision: Both Models fit equally

Ques 5:

Change in SS:

Value of LR: 25.093

p-value for LR: 0.01439

Decision: Both Models fit equally

Ques 6:

Equation: logSales = 4.717 + (0.006)*MONTH + (0.302)*lagLSales12 + (0.308)*lagLSales1

Increase in SS: 1.08

Proportion: 0.68

Ques 6.5:

Equation:

```
final_model2 <- lm(logSales~MONTH+I(MONTH^2)+lagLSales1, data = WebSales3)
```

Ques 7:

R-Square: 90.35%

Ques 8:

Number of Predictors: 3

Ques 9:

RESET

Power	Stat	p	p<0.05
2	1.888	0.1743	No
3	2.1914	0.1438	No
4	2.1556	0.147	No

DURBIN WATSON

Order	DW	P < 0.05
1	2.02	0.842

SHAPIRO

Stat	p	P < 0.05
0.98553	0.6188	No

WHITE

df	Stat	p	P < 0.05
2	1.33	0.515	No

Ques 10:

Forecast: $490438.3

```
  Point Forecast    Lo 80    Hi 80    Lo 95    Hi 95
1       13.10305 12.74858 13.45753 12.55619 13.64992
> exp(c(f1$mean,f1$lower,f1$upper))
[1] 490438.3 344062.7 283846.7 699087.1 847393.2
```