WEEK 7 HOMEWORK

1. A real estate analyst has developed a multiple regression line, $y = 60 + 0.068 x_1 - 2.5 x_2$, to predict $y =$ the market price of a home (in $1,000s), using independent variables, $x_1 =$ the total number of square feet of living space, and $x_2 =$ the age of the house in years. The regression coefficient of x_2 suggests this: _____.

○ Whatever be the square feet area of the living space, a 1 year increase in the age of the homes will result in a predicted drop of $2500 in the price of the homes

○ If the square feet area of living space is kept constant, a 1 year increase in the age of the homes will result in a predicted increase of $2500 in the price of the homes

○ If the square feet area of living space is kept constant, a 1 year increase in the age of the homes will result in a predicted drop of $2500 in the price of the homes

○ Whatever be the square feet area of the living space, a 1 year increase in the age of the homes will result in a predicted increase of $2500 in the price of the homes

2. The following is a **partial** computer output of a multiple regression analysis of a data set containing 20 sets of observations on the dependent variable

The regression equation is
SALEPRIC = 1470 + 0.8145 LANDVAL + 0.8204 IMPROVAL + 13.529 AREA

Predictor	Coef	SE Coef	T	P
Constant	1470	5746	0.26	0.801
LANDVAL	0.8145	0.5122	1.59	0.131
IMPROVAL	0.8204	0.2112	3.88	0.0001
AREA	13.529	6.586	2.05	0.057

S = 79190.48   R-Sq = 89.7%   R-Sq(adj) = 87.8%

Analysis of Variance

Source	DF	SS	MS
Regression	3	8779676741	2926558914
Residual Error	16	1003491259	62718204
Total	19	9783168000	

What is the prediction value when LANDVAL = 25, IMPROVAL = 36 and