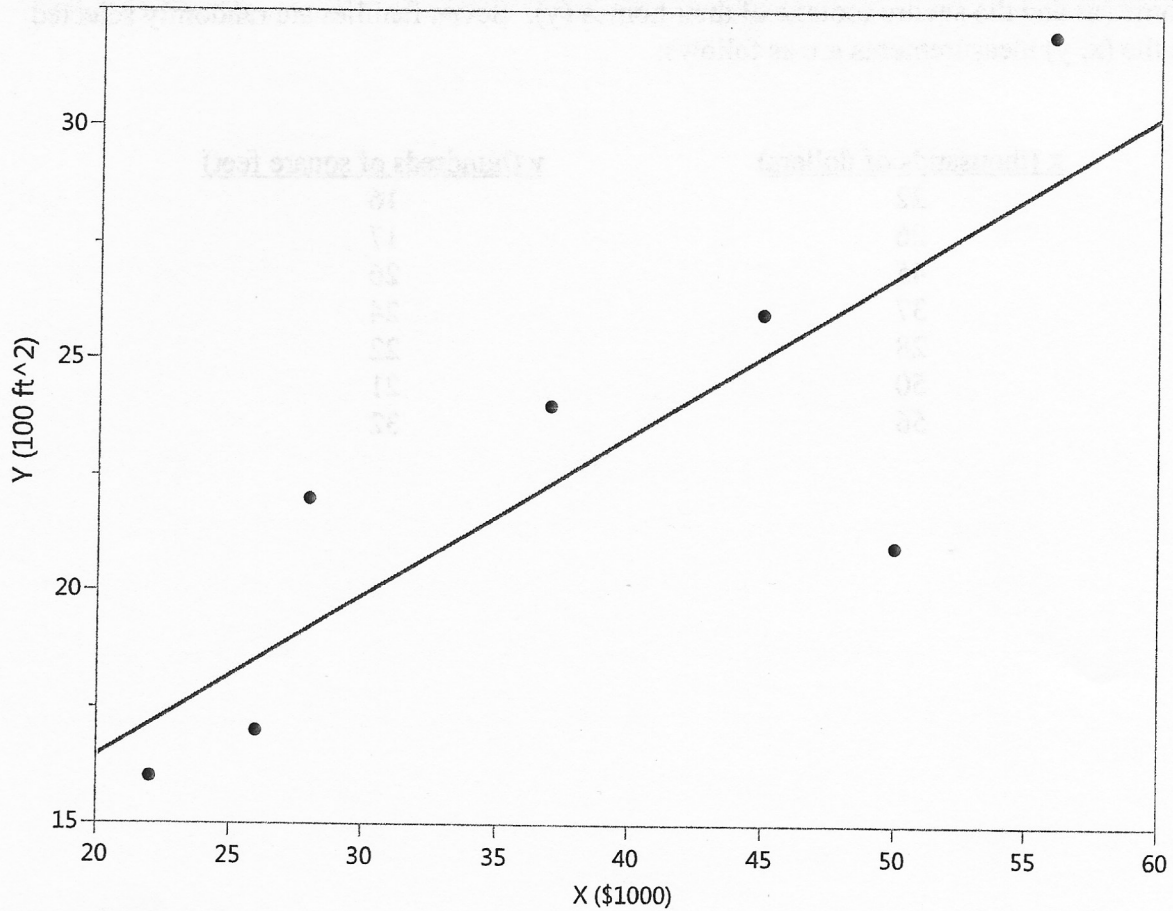


EX: A real-estate developer is interested in determining the relationship between family income (x) and the square footage of their homes (y). Seven families are randomly selected and the (x, y) measurements are as follows:

<u>x (thousands of dollars)</u>	<u>y (hundreds of square feet)</u>
22	16
26	17
45	26
37	24
28	22
50	21
56	32

<u>x</u>	<u>y</u>	<u>x<sup>2</sup></u>	<u>y<sup>2</sup></u>	<u>xy</u>
22	16	484	256	352
26	17	676	289	442
45	26	2025	676	1170
37	24	1369	576	888
28	22	784	484	616
50	21	2500	441	1050
<u>56</u>	<u>32</u>	<u>3136</u>	<u>1024</u>	<u>1792</u>
264	158	10974	3746	6310

### Bivariate Fit of Y (100 ft^2) By X (\$1000)



— Linear Fit

#### Linear Fit

$$Y (100 \text{ ft}^2) = 9.5551811 + 0.3451278 * X (\$1000)$$

#### Summary of Fit

RSquare	0.674343
RSquare Adj	0.609212
Root Mean Square Error	3.421261
Mean of Response	22.57143
Observations (or Sum Wgts)	7

#### Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	1	121.18915	121.189	10.3536
Error	5	58.52513	11.705	Prob > F
C. Total	6	179.71429		0.0235*

#### Parameter Estimates

Term	Estimate	Std Error	t Ratio	Prob> t
Intercept	9.5551811	4.246858	2.25	0.0743
X (\$1000)	0.3451278	0.107259	3.22	0.0235*