LINEAR REGRESSION – NUMERICAL EXAMPLE

	XI	YI	xi - mean(x)	yi - mean(y)	(xi-mean(x)) * (yi - mean(y))	(xi - mean(x))* (xi - mean(x))	(yi-mean(y)) * (yi - mean(y))	Predicted Grades = yi hat + 4.74(xi)	Error = yi - yhat	SQUARED ERROR = (YI -YHAT) * (YI-YHAT)
	2	69	-2.8	-8.8	24.64	7.84	77.44	64.528	4.472	19.998784
	9	98	4.2	20.2	84.84	17.64	408.04	97.708	0.292	0.085264
	5	82	0.2	4.2	0.84	0.04	17.64	78.748	3.252	10.575504
	5	77	0.2	-0.8	-0.16	0.04	0.64	78.748	-1.748	3.055504
	3	71	-1.8	-6.8	12.24	3.24	46.24	69.268	1.732	2.999824
	7	84	2.2	6.2	13.64	4.84	38.44	88.228	-4.228	17.875984
	1	55	-3.8	-22.8	86.64	14.44	519.84	59.788	-4.788	22.924944
	8	94	3.2	16.2	51.84	10.24	262.44	92.968	1.032	1.065024
	6	84	1.2	6.2	7.44	1.44	38.44	83.488	0.512	0.262144
	2	64	-2.8	-13.8	38.64	7.84	190.44	64.528	-0.528	0.278784
sum =	48	778			320.6	67.6				
mean =	4.8	77.8								

	XI	YI	Predicted Grades = yi hat + 4.74(xi)	Error = yi - yhat	SQUARED ERROR = (YI -YHAT) * (YI-YHAT)	DEVIATION = (Y1 - MEAN(YI)	SQUARED DEVIATION = (YI - MEAN(YI)) * (Y1 - MEAN(YI))
	2	69	64.528	4.472	19.998784	-8.8	77.44
	9	98	97.708	0.292	0.085264	20.2	408.04
	5	82	78.748	3.252	10.575504	4.2	17.64
	5	77	78.748	-1.748	3.055504	-0.8	0.64
	3	71	69.268	1.732	2.999824	-6.8	46.24
	7	84	88.228	-4.228	17.875984	6.2	38.44
	1	55	59.788	-4.788	22.924944	-22.8	519.84
	8	94	92.968	1.032	1.065024	16.2	262.44
	6	84	83.488	0.512	0.262144	6.2	38.44
	2	64	64.528	-0.528	0.278784	-13.8	190.44
sum =	48	778					
mean =	4.8	77.8					