

## Modeling and Regression (using the TI-83/84):

### A. Clear Previous Data

### B. Enter New Data

### C. Calculate the Regression Equation and Enter in Y= to Graph Equation

1. Press STAT
2. Arrow right to CALC
3. Choose the number for the type of equation that will fit your data:

4: LinReg (ax + b) - this is a linear equation	$y = ax + b$
5: QuadReg - this is a quadratic equation	$y = ax^2 + bx + c$
6: CubicReg - this is a cubic equation	$y = ax^3 + bx^2 + cx + d$
9: LnReg - this is a logarithmic equation	$y = a + b \ln x$
0: ExpReg - this is an exponential equation	$y = a * b^x$
A: PwrReg - this is a power equation	$y = a * x^b$

4. VARS
5. Arrow to Y-VARS
6. 1: Function
7. 1: Y1
8. Press ENTER

```

EDIT [2ND] [STAT] TESTS
1:1-Var Stats
2:2-Var Stats
3:Med-Med
4:LinReg(ax+b)
5:QuadReg
6:CubicReg
7:↓QuartReg
    
```

```

EDIT [2ND] [STAT] TESTS
7:↑QuartReg
8:LinReg(a+bx)
9:LnReg
0:ExpReg
A:PwrReg
B:Logistic
[2ND] SinReg
    
```

#### Example: Linear Regression: 4: LinReg (ax + b)

$$y = 2.357142857x + 8.5$$

If you don't see r =

9. 2nd 0 [catalog]
10. Arrow down to:  
DiagnosticOn

11. ENTER
12. ENTER
13. Repeat steps 1-8 above.

```

LinReg
y=ax+b
a=2.357142857
b=8.5
r²=.9993881921
r=.9996940493
    
```

### Alternate Method to Enter the Regression Equation

1. Y=
2. VARS
3. Statistics
4. Arrow over to EQ
5. RegEQ
6. ENTER