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Finding 2nd derivatives

TI-84 Plus

```

Plot1 Plot2 Plot3
Y1=3X^5-5X^3
Y2=
Y3=
Y4=
Y5=
Y6=

```

There is no second derivative function on the TI-84 Plus, so we differentiate twice using the first derivative.

$$\frac{d}{dx} \left(\frac{d}{dx} (Y_1) \right) \bigg|_{x=0} = 0$$

$$\frac{d}{dx} \left(\frac{d}{dx} (Y_1) \right) \bigg|_{x=-1} = -30.00011998$$

$$\frac{d}{dx} \left(\frac{d}{dx} (Y_1) \right) \bigg|_{x=1} = 30.00011998$$

Casio fx-9860GII

```

Graph Func :Y=
Y1=3X^5-5X^3
Y2:
Y3:
Y4:
Y5:
Y6:
[SEL] [DEL] [TYPE] [STYL] [ZMEM] [DRAW]

```

$$\frac{d^2}{dx^2} (Y_1) \bigg|_{x=0} = 0$$

$$\frac{d^2}{dx^2} (Y_1) \bigg|_{x=-1} = -30$$

Y T X T Y T X

$$\frac{d^2}{dx^2} (Y_1) \bigg|_{x=1} = 30$$

Y T X T Y T X