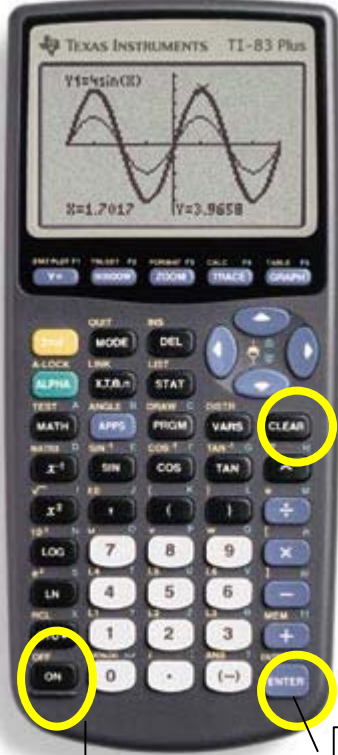


## Opening Activity

### TI-83 Plus Scavenger Hunt!

<p><b>Completed</b> (mark with X)</p>	<p><b>Calculations on the home screen</b></p> <ol style="list-style-type: none"> <li>1. Press the <b>ON</b> button in the lower left corner.</li> <li>2. Press <b>CLEAR</b> to remove any entries from your TI-83 Plus.</li> </ol> <p><b>Perform a Calculation:</b> Do the following calculation just as it is written below:</p> <p>3. Press <b>8</b><b>+</b><b>4</b><b>×</b><b>5</b></p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <math>8+4*5</math> </div> <p>4. Press <b>ENTER</b>. (Note: Pressing <b>ENTER</b> evaluates the expression on your screen). What answer appears on the screen?</p> <p>_____</p> <p>5. Now do the same calculation but include some parentheses as follows: Press <b>(</b><b>8</b><b>+</b><b>4</b><b>)</b><b>×</b><b>5</b></p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <math>8+4*5</math> 28  <math>(8+4)*5</math> </div> <p>6. Press <b>ENTER</b>. What answer appears on the screen?</p> <p>_____</p> <p>Why is it different from the one you got before?</p> <p>_____</p> <p>_____</p>	 <p>Step 1: the ON key</p> <p>Step 2: the CLEAR key</p> <p>Step 4: the ENTER key</p>
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### Find the Square Root of 45:

7. Press the **2nd** button. (Note: Pressing the **2nd** button and releasing it allows you to access the yellow functions printed above many of the TI-83 Plus keys).

8. Press **[√]** (you actually press the **[x<sup>2</sup>]** button, but because you first pressed the **2nd** button, you the square root function will be activated).

9. Key in 45.

8+4*5	28
(8+4)*5	60
√(45	

10. Press **[ENTER]**. What is your answer?

Step 7:  
Access 2<sup>nd</sup>  
functions

Step 8:  
the  
square  
root

### Raise 7.5 to the 4<sup>th</sup> power:

11. Key in 7.5

12. Press **[^]**. (Note: The **[^]** button allows you to raise to a power)

13. Key in 4

8+4*5	28
(8+4)*5	60
√(45	6.708203932
7.5^4	

14. Press **[ENTER]**.

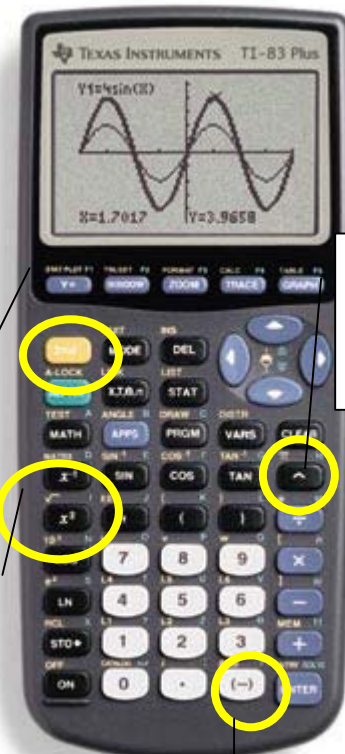
### Another example:

15. Key in  $(-2)^2$ , **[(-)]****[2]****[^]****[2]** (Note: the negative symbol **[(-)]** is near the **[ENTER]** key - see picture of TI-83 Plus)

8+4*5	28
(8+4)*5	60
√(45	6.708203932
7.5^4	3164.0625
(-2)^2	

16. Press **[ENTER]**. What is your answer?

17. Now enter  $-2^2$  (without the parenthesis) and press **[ENTER]**. What do you notice? Why is there a difference?



Step 12:  
Raise to a  
power

Step 15: Negative Symbol

**Mode Key: Change the number of decimal places**

18. Press **[MODE]** to enter the Mode environment, and press **▼▼▼▼** to highlight 3 and press **[ENTER]**. This will change the decimal to 3 places.

```
Normal Sci Eng
Float 0123456789
Radian Degree
Func Par Pol Seq
Connected Dot
Sequential Simul
Real a+bi re^θi
Full Horiz G-T
```

19. Return to the Homescreen by pressing **[2nd][QUIT]**. The **[QUIT]** key is the 2<sup>nd</sup> function of the **[MODE]** key. (Note: In general, when you want to start over "Quit and go Home" -- **[2nd][QUIT]** will take you back to the homescreen.

20. Perform the following calculation:

$$25.6893^2$$

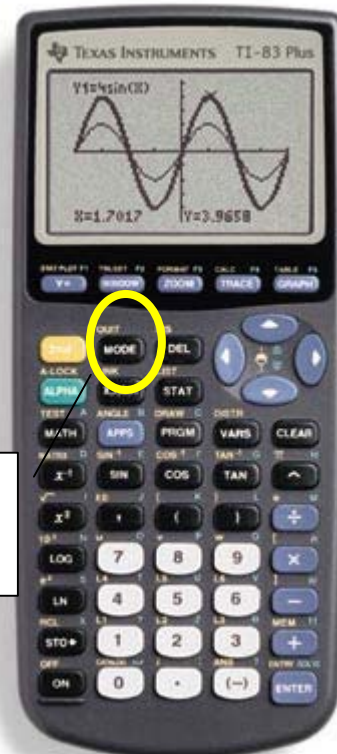
What is your answer? \_\_\_\_\_

21. Press **[MODE]** and change your decimal to FLOAT. Press **▼[ENTER]**. This will change the decimal places to Float mode.

22. Go back to the home screen and press **[2nd][ENTER]**. What happens?

23. Press **[ENTER]**. Compare this number to the one you got in your calculation above. What happened?

Step 18:  
Change the  
MODE



### Graphing and evaluating functions

24. Press **MODE** and have everything on the left highlighted.

25. Find the **Y=** key and press it. Press **CLEAR**.

26. Key in  $2x + 3$  in  $Y1=$  (**2****X****,****T****,****θ****,****n****)****+****3**)

```
Plot1 Plot2 Plot3
Y1=2X+3
Y2=
Y3=
Y4=
Y5=
Y6=
Y7=
```

27. Press the **WINDOW** key and change the settings to the following. Use the cursor arrows to navigate between choices:

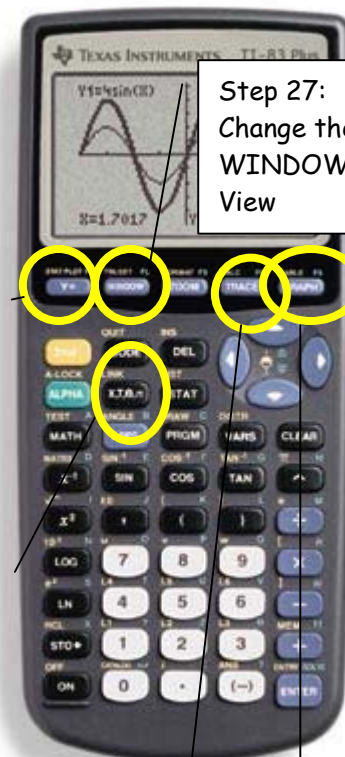
```
WINDOW
Xmin=-5
Xmax=5
Xscl=1
Ymin=-5
Ymax=5
Yscl=1
Xres=1
```

28. Press **GRAPH**.

29. Press **TRACE**. Use the arrow keys **◀▶** to move the cursor along the function. What do you see?

---

---



Step 27:  
Change the  
WINDOW  
View

Step 25:  
Key in a  
Function

Step 26:  
the X key

Step 29:  
Trace the  
function

Step 28:  
Graph key

29. Press  $\boxed{2\text{nd}}[\text{TABLE}]$ .

X	Y <sub>1</sub>	
-3	-3	
-2	-1	
-1	1	
0	4	
1	5	
2	6	
3	7	

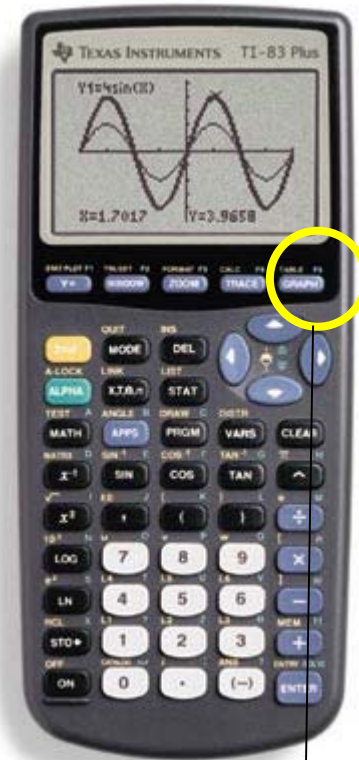
X=1

---

30. Press **MODE** **↓** **↓** **↓** **↓** **↓** **↓** **↓** **↓** highlighting *G-T* and press **ENTER**.

```
Normal Sci Eng
Float 0123456789
Radian Degree
Func Par Pol Seq
Connected Dot
Sequential Simul
Real a+bt re^0t
Full Horiz G-I
```

---



## Step 29: Create a Table