

Using a Graphing Calculator

BASIC MATH

- The **ENTER** key essentially means **=**.
 - **EXAMPLE:** To do $2 + 2$, press **2** **+** **2** **ENTER** ... The answer is 4.
- The **^** key (above divide) means “to the”. Use it to take powers.
 - **EXAMPLE:** To do 2^5 , press **2** **^** **5** **ENTER** ... The answer is 32.
- Parentheses are located in the row above the 8 and 9 keys.
 - **EXAMPLE:** To do $(-2)^4$, press **(** **(-)** **2** **)** **^** **4** **ENTER** ... The answer is 16.
- To use the features written above the keys in yellow, you must first press **2nd**.
 - **EXAMPLE:** To do $\sqrt{64}$, press **2nd** **x²** **6** **4** **ENTER** ... The answer is 8.
 - **NOTE:** On a TI-83, the screen will show parentheses “ $\sqrt{(64)}$ ” when you do a square root. You can close them, but you don’t have to.
- The divided by **÷** key shows up as a slash “/” on the screen. You can also use **÷** to enter fractions.
 - **EXAMPLE:** To type $\frac{1}{2}$, press **1** **÷** **2** .
- To change a decimal to a fraction, press **MATH** and then **ENTER** **ENTER** .
- To enter a negative number, press **(-)** (next to the decimal point) before the number. The “minus” key (next to the press **6**) is just for subtraction.
 - **EXAMPLE:** To do $7 - -2$, press **7** **-** **(-)** **2** **ENTER** The answer is 9.
- If you get on some strange screen and don’t know where you are, press **2nd** and then **MODE** (“QUIT”) to get back to the main screen.
- If you want to do repeated similar calculations, you can hit **2nd** **ENTER** to see what you just typed. Use the arrow keys to go back and type over what you want to change.
- If you want to use the answer you just got in a calculation without re-typing it, you can hit **2nd** **(-)** to put **Ans** (the answer you just got) on the screen.

GRAPHING

- TO ENTER AN EQUATION: Press **Y=**. Then type the main part of the equation after “\Y1=” on the screen.
- Use the **X,T,θ,n** key (just below “MODE”) any time you need “X” in an equation. Use any other symbols (like +, √, etc.) exactly where they appear in the problem.
- If number fractions come up (like in the slope of a line), put the whole fraction in parentheses.
 - **EXAMPLE:** To graph $y = \frac{2}{3}x - 5$, press **Y=**. Then type (2/3)X-5
- If there is a fraction with “x” as part of it, put the whole top (the numerator) and the whole bottom (the denominator) separately in parentheses.
 - **EXAMPLE:** To graph $y = \frac{x+1}{x-3}$, press **Y=**. Then type (X+1)/(X-3)
- Press **GRAPH** to see what the graph looks like.
- Depending on what you’re doing in class, you may want to use the **WINDOW**, **TRACE**, or **ZOOM** keys to see specific areas of the graph. Ask your instructor for information on exactly how you are using these in your class.

COMMON PROBLEMS

- **I can't see the screen well.**

- Press 2^{nd} \blacktriangle (up arrow) repeatedly. The screen will get darker each time you press it.
- Press 2^{nd} \blacktriangledown (down arrow) repeatedly. The screen will get lighter each time you press it.
- If you still can't see the screen clearly, try replacing your batteries (size AAA).

- **I get errors every time I try to graph.**

- Press 2^{nd} $Y=$ ("STAT PLOT"). Then use the down arrow to choose #4 ("PlotsOff"). Finally press ENTER . This turns off a feature that may be goofing up the grapher.

- **The graph doesn't look like it's supposed to.**

- Press ZOOM . Then use the down arrow to choose #6 ("ZStandard"). Finally press ENTER . This resets the viewing window to the most common area.

- **I screwed up and typed the wrong thing.**

- You can just type over what's there already. Use the \blacktriangleleft (left arrow) key to go back to the mistake, and then just type over it.
- If you want to just start over, press the CLEAR key. If you're on the main screen, it will blank out everything. If you're graphing, it will clear out the equation that was there before.
- If you want to get rid of an extra number you accidentally typed, use the arrow keys to move the cursor on top of it. Then press DEL . The extra number will disappear.
- If you want to insert an extra number, use the arrow keys to find the place you want to put it. Then press 2^{nd} and then DEL ("INS"). You can now insert what is missing.



- **I cleared something out, but I want to see it again.**

- On the main screen press 2^{nd} and then press ENTER ("ENTRY"). This will show the last thing you typed on the main screen.
- You can press ENTER again to get the last answer.
- You can type over the last entry to change some numbers and work out a similar problem.

- **I thought I did everything right, but I'm not getting the right answer.**

- Double check to make sure everything is entered **EXACTLY** right. In particular, make sure you:
 - didn't confuse negative $(-)$ with minus $-$.
 - Used parentheses everywhere you needed to. (When in doubt, put things in parentheses.)
 - Pressed 2^{nd} to get features like $\sqrt{\quad}$ that are written above the keys.
- Check to make sure your calculator is set in the correct mode.
 - Press MODE to see the modes.
 - The top line (**Normal** Sci Eng) should have "Normal" highlighted.
 - The second line (**Float** 01234556789) should have "Float" highlighted.
 - If you're graphing, the line that says "**Func** Par Pol Seq" should have "Func" highlighted.
 - If something else is highlighted, use the arrow keys \blacktriangleright or \blacktriangleleft to choose the right one, and then press ENTER to select it.
 - Once things are correct, press 2^{nd} and then MODE ("QUIT) to get back to the main screen.

NOTE: You may wish to set the view in CLASSIC view, which will be what is used for examples.

1. Press **MODE**.
2. Press the  (down arrow) key until you see a choice of MATHPRINT – CLASSIC.
3. Use the  (right arrow) key to highlight **CLASSIC**.
4. Then press **ENTER**.
5. Finally hit **2nd** and then **MODE** to QUIT and get back to a blank screen.