



Scavenger Hunt – TI-Nspire CAS™ Touchpad

AP CALCULUS: GETTING TO KNOW THE CALCULATOR PAGE

Activity Overview

Name _____ Period _____

- In this activity, you will create and investigate the features of a calculator page.

Getting to Know the TI-Nspire™ Touchpad

- Where are the letters? What do you notice about them? _____
_____ Do you know why they are like that? __ yes __ no
- Which key is located under the **(doc)** key? _____
- Which key do you think you push to access the yellow functions on the keypad? _____
- The Touchpad is used to navigate the cursor around the screen.
What body part appears above the CLICK in the middle of the Touchpad? _____
- Press **(on)** to turn on the handheld. To adjust the contrast, hold down the **(ctrl)** and press **(+)** or **(-)** keys repeatedly to lighten or darken the screen.

Starting to Navigate the Handheld

- Press **(on)** to enter the Home Screen.
 - How many options are there to select from on the screen? _____
 - Which options might you select to graph a line? _____
 - Which options remind you of some computer functions? _____
- Press **(on)** **(1)** to create a new document. If prompted to save the current document, **(tab)** to [NO] and press click **(%)** or **(enter)**. Press **(1)** to start the new document with a calculator. A blank page appears on the screen and a tab labeled 1.1 appears in the top-left corner of the screen. What appears in the lower-right corner of the screen? _____
- Perform the following calculations.
 - Type $1/2+1/3$ and press **(enter)**. What do you notice? _____
 - Press **(ctrl)** **(enter)**. What do you notice? _____
 - Press **(trig)** **(π)** **(\div)** **(3)** and press **(ctrl)** **(enter)**. What do you notice? _____
 - Type $(4-3(2-4)3-7)2$ and press **(enter)**. Notice the *faded* images of the closing parentheses. What was the result? _____
- What do you think the 4/99 in the bottom-right corner of the screen means? _____
- The handheld is designed to mimic the operation of computers and computer software. Many of the traditional shortcut keys used with computer software are available on a TI-Nspire handheld. The handiest ones, **(ctrl)** **(Z)** (or **(esc)**, see the icon above it **(↵)**) and **(ctrl)** **(Y)**, are used to “undo” and “redo” actions.

TI-Nspire CAS Scavenger Hunt - Touchpad

11. Use $\text{(ctrl)} \text{ } \div$ to perform the following calculations. Ask your neighbor (and then your teacher) if they know a shortcut about using the history to do letter d once c is done.

a. $\frac{1}{\sqrt{2}}$

c. $\frac{-5 + \sqrt{5^2 - 4(6)(-4)}}{2(6)}$

b. $\frac{\frac{1}{3} + \frac{1}{5}}{\frac{4}{7} - 2} + 3$

d. $\frac{-5 - \sqrt{5^2 - 4(6)(-4)}}{2(6)}$

12. Perform the following actions. Use $\text{(ctrl)} \text{ } =$, (?!>) , or $\text{(}\pi\text{)}$ to access the necessary symbols.

a. Type $-4 < -5$. What did you get? _____

b. Press $\text{(menu)} > \text{algebra} > \text{solve} \text{(enter)} \sin(\theta) = 1/2, \theta \text{(J)} | -\pi < \theta < \pi$ What did you get? _____

c. Type 100!

How many zeros are at the end of this? _____

d. Type $v = \frac{d}{t}$ (enter) . Then press $\text{(x)} \text{(T)} \text{(enter)}$. What did you get? _____

e. Now press $\text{(div)} \text{(V)} \text{(enter)}$. What did you get? _____ This is CAS = Computer Algebra System – a great tool for exploring mathematics, checking your work, identifying patterns, remediation, and climbing the tree of mathematics.

f. Type $\sqrt[3]{\frac{8}{125}}$ Could you find the icon to do the cube root above ^ ? What did you get? _____

An important TI-Nspire key combinations to be remember and take away from this activity is $\text{(ctrl)} \text{(enter)}$.

Again, what does this do? _____