



# 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)** **( $\pi$ )** **( $\div$ )** **(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  $\text{(ctrl)} \text{ } =$ ,  $\text{(?!>)}$ , 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  $v = \frac{d}{t}$   $\text{(enter)}$ . 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  $\text{^}$ ? 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? \_\_\_\_\_