Calculator

Levels

Grades K-4

Overview:

The calculator is a utility that comes with every Macintosh. In this activity students will use the calculator to solve problems.

Objectives:

The student will:

- launch the calculator; and
- solve problems using the calculator.

GLEs Addressed:

Math

[3] E&C-4 The student accurately solves problems (including real-world situations) by adding or subtracting two-digit whole numbers.

[4] E&C-4 The student accurately solves problems (including real-world situations) by multiplying two-digit numbers by single-digit numbers.

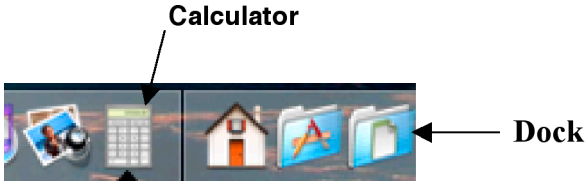
[4] E&C-5 The student accurately solves problems (including real-world situations) by adding fractions with like denominators to 12.

Materials:

- Computer with Macintosh OSX
- STUDENT WORKSHEET

IT Basics

The calculator may already be available on the OS X dock. If not, the calculator can be found in the Applications folder on the hard drive. To add it to the dock, drag the icon of it to the left side of the line on the dock. A basic calculator is also available as a widget in OS X 10.4. This lesson uses the calculator found in the Applications folder.



Clicking on the calculator will launch a basic calculator. Apple changed the appearance of the calculator between OS X 10.2 and 10.3. The screen shots in this lesson use the OS X 10.3 and newer version. If more advanced functions are needed they can be accessed by clicking on the **Advanced** button on the OSX 10.2 and earlier versions. The advanced functions in OS X 10.3 and newer are found under **View** → **Advanced** on the menu.

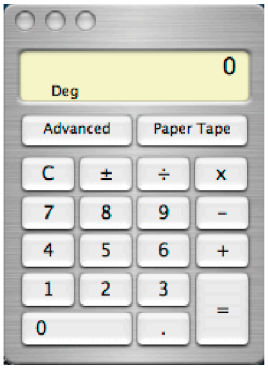
On the 10.2 and older calculators the text "**Deg**" will be seen. This is for measurements in degrees. The Paper Tape button will open a window that shows the numbers and calculations while using the calculator. In version 10.3 and newer the Paper Tape is found on the menu under **View** → **Show Paper Tape**.

Another useful feature to show students is **Convert** on the menu. To convert measurements type the number in the calculator that is to be converted. On the Convert menu select the type of measurement. A pop up window will give the conversion options. Choose the appropriate units and click **OK**.

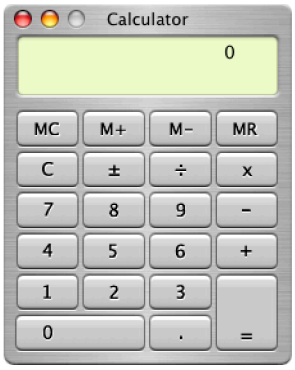
Activity Procedure

1. Explain students will use the calculator on their computer. Divide students into groups or assign each student a computer.
2. Show students how to launch the calculator by clicking the calculator icon on the dock. When it opens you will see a basic calculator. There will also be a small black triangle underneath the icon on the dock like the one shown above.
3. Ask students to launch the calculator. Check to make sure students have done this successfully.

Teacher's Note: Depending of which version of the Macintosh operating system you are using, one of the following calculators will launch. Although they look slightly different, the directions in this lesson will work for either one.



Calculator in OS 10.2 and earlier



Calculator in OSX 10.3 and newer

4. If there are numbers in the display before starting a calculation ask students to press the clear ("C") button. Remind students that they can also press the clear ("C") button to start over if they make a mistake during the calculations.
5. Distribute the STUDENT WORKSHEET: "Using the Macintosh Calculator" and guide students through the first two problems. Ask students to work individually or in small groups to solve the remaining problems.

Teacher's Note: If the equations presented in this lesson are too difficult or too easy for your students, modify them as appropriate.

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6. If time allows show students how to toggle on the Paper Tape. Ask students why it would be useful to use the Paper Tape window.

Answers

1. 768
2. 47.2
3. 18
4. .5
5. 7.35
6. 7 degrees
7. 11.2 centimeters

Name:_____

Levels

Using the Macintosh Calculator

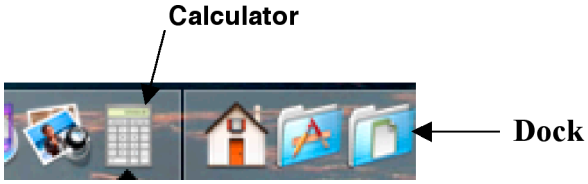
Student Worksheet (1 of 4)

I-II

Grades K-4

Background Information

The calculator is a utility application that comes with every Macintosh. It looks like a small calculator and can be found on the dock.



Use the calculator to solve the following problems.

Name:_____

Levels

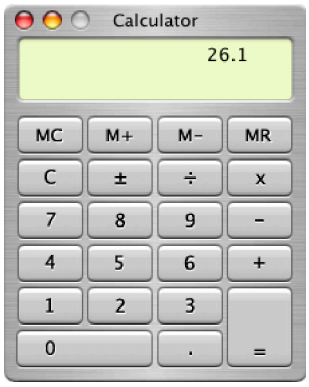
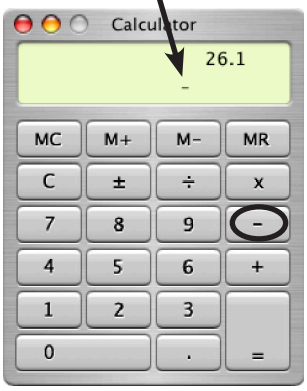
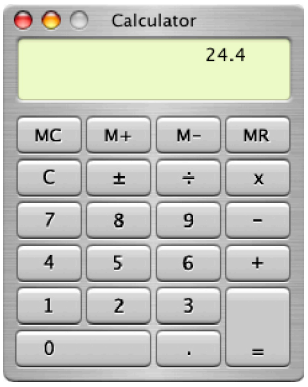
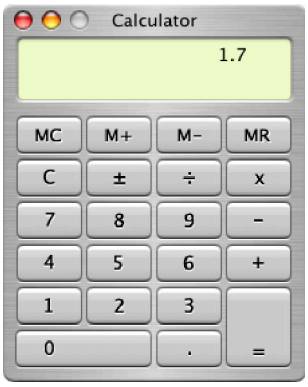
I-II

Grades K-4

Using the Macintosh Calculator

Student Worksheet (2 of 4)

Problem 1: The average high temperature for July was 26.1º C. The average high temperature for August was 24.4º C. How many degrees warmer was the average high temperature in July than it was in August?

STEP 1	**STEP 2**	**STEP 3**	**STEP 4**
Enter the number 26.1. **Helpful hint:** If you make a mistake press the clear ("C") button to start over.	Enter the subtraction sign (-). Notice the small subtraction sign in the display.	Enter the number 24.4.	Press the equals sign (=).
			

Answer: The average high temperature was 1.7 degrees warmer in July.

Name:_____

Levels

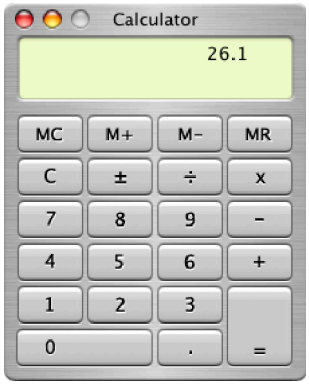
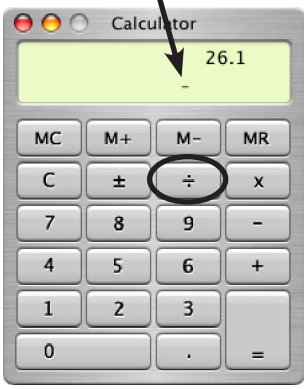
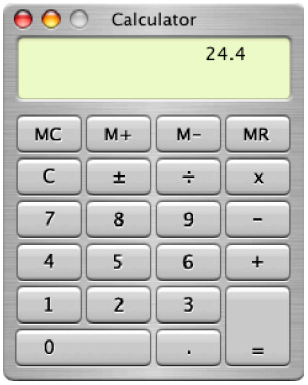
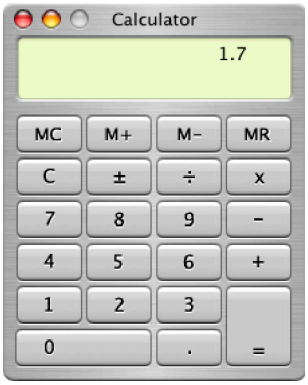
I-II

Grades K-4

Using the Macintosh Calculator

Student Worksheet (3 of 4)

Problem 2: A scientist has determined that the level of the lake she is studying has dropped 17 centimeter over the last 6 years. What was the average rate that the lake dropped each year?

STEP 1	**STEP 2**	**STEP 3**	**STEP 4**
Enter the number 17.	Press the division sign.	Enter the number 6.	Press the equals sign (=).
			

Answer: The lake has dropped 2.833333333333 cm a year.

To change the number of decimal places go to **View** → **Precision** on the menu. (Note: only available in OSX 10.3 or newer)

Name:_____

Levels

Grades K-4

Using the Macintosh Calculator

Student Worksheet (4 of 4)

Directions: Use the calculator to find the answers to the following problems.

1. 24 x 32 = _____

2. 34.4 + 12.8 = _____

3. 54 ÷ 3 = _____

4. 1.2 – .7 = _____

5. 3.5 x 2.1 = _____

6. At 6:00 AM it was 5º C. At noon it was 12º C. How many degrees warmer was it at noon than it was at 6:00 AM?

_____

7. A scientist studying trees in an area found that they increase by an average of 1.4 cm in height each year. What will be the average increase in the height of the trees in 8 years?

_____