

Calculators and Order of Operations

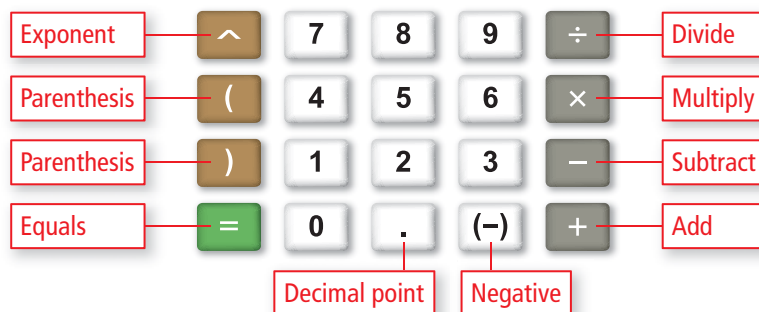
Some calculators use the standard order of operations and some do not. Rather than relying on your calculator to perform the operations in the correct order, you should use a calculator that has parentheses. Also, for this book, you will need a calculator with an exponent key.

Study Tip

Here is an example of the exponent key. There are 12^3 cubic inches in 1 cubic foot.



Recommended Calculator Keys



EXAMPLE 3 Using a Calculator

You are taking a 3-credit evening course. The cost is \$150 for registration and \$219 for each credit. Which of the following keystroke sequences is better for finding the total cost? Explain your reasoning.

- a.
- b.

SOLUTION

- a. This sequence is better. You are forcing the calculator to multiply 3 by 219 before adding 150.

$$\begin{aligned} \text{Total cost} &= 150 + 3(219) \\ &= 150 + 657 && \text{Multiply.} \\ &= 807 && \text{Add.} \end{aligned}$$

The correct total cost is \$807.

- b. On some calculators, this keystroke sequence gives an incorrect total because it adds 150 and 3 to get 153 and then multiplies by 219 to get a total of \$33,507, which is an unreasonable answer.

✓ Checkpoint

Help at Math.andYOU.com

Your cell phone bills for 3 months are \$50, \$62, and \$73. Which of the following keystroke sequences is better for finding your average monthly bill? Explain your reasoning.

- c.
- d.