

Algebra Essentials and Applications Internet Activity

ME1 Metrics Investigations

1. To find how many centimeters there are in one inch, enter “1” in the box next to “Inch (in).” Then click your mouse elsewhere on the page or press the tab key. How many centimeters are in one inch?

2. Using the number you found in Exercise 1 as the constant of variation, write the equation expressing centimeters (y) in terms of inches (x).

3. Using this equation, how many centimeters are in 17.5 inches? Check your answer by clearing the entries and then entering 17.5 in the “Inch (in)” box. Was your answer correct?

4. The distance from Earth to the Sun is called an *Astronomical Unit*, abbreviated AU. How many miles are in one AU? Round to the nearest thousand miles.

5. Write an equation expressing miles (y) in terms of AU (x).

6. The planet Jupiter is 5.2 AU from the Sun. Using the equation from Exercise 5, how many miles from the Sun is Jupiter?

Use the “Back” arrow to return to the previous screen. Select “Volume Conversion.”

7. How many liters are in one gallon? Round to three decimal places.

8. Write an equation expressing liters (y) in terms of gallons (x).

Use the “Back” arrow to return to the previous screen. This time select “Speed Conversion.”

9. Find the equivalent of one kilometer per second (kps) in miles per hour (mph). Round to three decimal places.

10. Write an equation expressing mph (y) in terms of kps (x).

11. Escape velocity for Earth is approximately 11.186 kps. What is the escape velocity in mph? Round to three decimal places. Check your answer with the computer. Were you correct?
