

Name _____ Class _____ Date _____

Practice It!



MA.8.G.5.1 Compare, contrast, and convert units of measure between different measurement systems (US customary or metric (SI)) and dimensions including...derived units to solve problems.

Dimensional Analysis

Find the appropriate factor or factors for each conversion.

1. millimeters to meters _____
2. inches to yards _____
3. days to minutes _____
4. kilograms to grams _____
5. miles to kilometers _____
6. liters to quarts _____
7. Convert 1300 pounds to tons. Show your work. _____
8. Marci drinks four 48-ounce glasses of water a day.
How many pints of water does she drink every day? _____
9. Mari bought $9\frac{1}{2}$ yards of ribbon. How many inches
of ribbon did she buy? _____
10. A bag of frozen vegetables weighs 42 ounces. How many
pounds does the package of vegetables weigh? _____
11. The 18th hole on the local golf course is 543 yards long.
How many feet is this distance? _____

Find the resulting unit.

12. $\text{cm} \cdot \frac{\text{m}}{\text{cm}}$ _____
13. $\frac{\text{price}}{\text{oz}} \cdot \frac{\text{oz}}{\text{lb}}$ _____
14. $\text{kg} \cdot \frac{\text{g}}{\text{kg}} \cdot \frac{\text{kg}}{\text{g}}$ _____
15. $\frac{\text{m}}{\text{h}} \cdot \frac{\text{cm}}{\text{m}} \cdot \frac{\text{h}}{\text{s}}$ _____

Convert. Round to the nearest tenth.

16. 85 km/h to mi/h _____
17. 15 gal/min to qt/s _____
18. 10 cm/s to ft/min _____
19. 32 ft/s to mi/h _____
20. A commercial airplane has a takeoff speed of
about 300 km/h. What is the takeoff speed in mi/h? _____
21. A french-fry machine is able to process 30 pounds of potatoes in
one minute. Express the machine's rate in kilograms per hour. _____
22. A hydroelectric dam lets water through at a rate of 1000 gal/min.
What is the rate in liters per second? _____