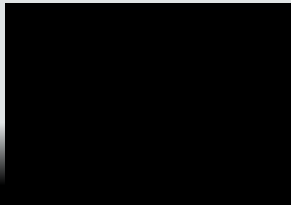
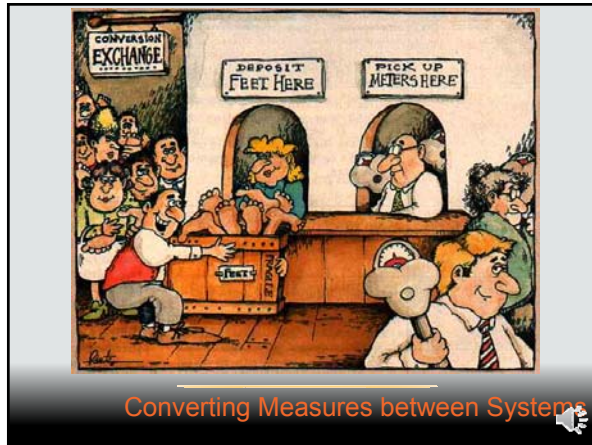


MasterMath

NUMBER SENSE

Converting Measures between Systems





Converting Measures between Systems



Conversions within a System of Measure

1 yard = 3 feet	1 meter = 100 centimeters = 1000 millimeters
1 mile = 1,760 yards = 5,280 feet	1 kilometer = 1000 meters
1 acre = 43,560 square feet	1 liter = 1000 milliliters = 1000 cubic centimeters
1 cup = 8 fluid ounces	1 gram = 1000 milligrams
1 pint = 2 cups	1 kilogram = 1000 grams
1 quart = 2 pints	1 minute = 60 seconds
1 gallon = 4 quarts	1 hour = 60 minutes
1 pound = 16 ounces	1 year = 52 weeks = 365 days
1 ton = 2,000 pounds	

Conversions between Systems of Measure

When converting from Customary to Metric, use these approximations.

1 inch = 2.54 centimeters	1 cup = 0.24 liter
1 foot = 0.305 meter	1 gallon = 3.785 liters
1 mile = 1.61 kilometers	1 ounce = 28.35 grams
	1 pound = 0.454 kilogram

When converting from Metric to Customary, use these approximations.

1 centimeter = 0.39 inch	1 liter = 4.23 cups
1 meter = 3.28 feet	1 liter = 0.264 gallons
1 kilometer = 0.62 mile	1 gram = 0.0352 ounce
	1 kilogram = 2.204 pounds

Converting Measures between Systems



6 miles equals how many kilometers?

1 mile = 1.61 kilometers

6 x 1 mile = 6 x 1.61 kilometers
6 miles = 9.66 kilometers

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Converting Measures between Systems

Which is greater, 12 ounces or 300 grams?

1 oz. = 28.35 grams

12 x 1 oz. = 12 x 28.35 grams
12 oz = 340.2 grams
340.2 grams > 300 grams
12 oz > 300 grams

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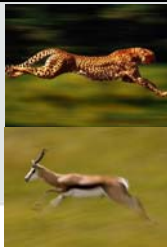
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Converting Measures between Systems

Which is faster, a cheetah, which can reach speeds of up to 70 MPH, or an antelope, that can run as fast as 98 km/H?

1 km = .62 m
98 x 1 km = 98 x .62 m
98 km = 60.76 m
60.76 MPH < 70 MPH



Conversions between Systems of Measure

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Converting Measures between Systems

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$$\frac{.62 \text{ m}}{1 \text{ km}} = 1 \text{ km}$$

$$\frac{98 \text{ km}}{1 \text{ hr}} \times \frac{.62 \text{ miles}}{1 \text{ km}} = \frac{98 \times .62 \text{ m}}{1 \text{ hr}} = 60.76 \text{ MPH}$$



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Converting Measures between Systems

You try it!
 6 liters equal how many gallons?

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1 L = 0.264 gal.
 6 x 1L = 6 x 0.264 gal
 6L = 1.584 gal

Converting Measures between Systems

You try it!

Who is taller: Freda is 61" tall; Pieter is 151 cm. tall.

Conversions between Systems of Measure

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1" = 2.54 cm

61 x 1" = 61 x 2.54 cm

61" = 154.94 cm

Converting Measures between Systems

You try it!

Which gets better fuel efficiency: Car A travels 37 miles per gallon; Car B travels 10 kilometers per liter.

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$$\frac{37 \text{ mi}}{1 \text{ gal}} \times \frac{1.61 \text{ km}}{1 \text{ mi}} \times \frac{1 \text{ gal}}{3.785 \text{ L}}$$

$$\frac{37 \times 1.61 \text{ km}}{3.785 \text{ L}} = \frac{59.57 \text{ km}}{3.785 \text{ L}} = 15.74 \text{ km/L}$$

Converting Measures between Systems 

You try it!

Now, try it on your own. Go to www.MasterMath.info download [Converting Measures between Systems](#) from the Worksheets Page, and test your skill.

Converting Measures between Systems 
