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Fermi Four

A famous teacher and physicist named Enrico Fermi liked to ask interesting questions of his students. Think about the questions below, and give your answers in the appropriate units.

Pre-Activity

Think about the speed limit on the main street of your town. How would you express this in **feet per hour**?

Now think about the speed limit on a major highway. How would you express this in **miles per minute**?

1. Your parents tell you that if you are good for 1 million seconds you will get a special treat. Will you have to be good for almost 12 hours, or 12 days, or 12 weeks?

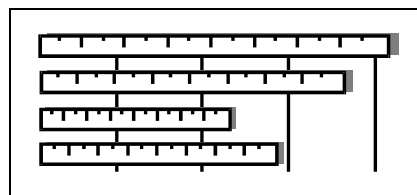
2. If you lay pennies side-by-side in a straight line so that they are touching each other, what is the value, **in dollars**, of a mile-long row of pennies?

3. It takes about four times as long to drive from Boston to New York as it does to fly. What do you think is average speed of an airplane? Express this number in **feet per minute**.

Conversion Fact Sheet

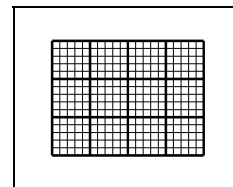
Measures of Length

1 foot (ft)	=	12 inches (in)
1 mile (mi)	=	5280 feet (ft)
1 yard (yd)	=	3 feet (ft) or 36 inches (in)



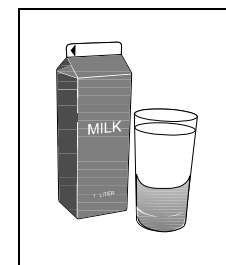
Measures of Area

1 square foot (ft ²)	=	144 square inches (in ²)
1 square yard (yd ²)	=	9 square feet (ft ²)



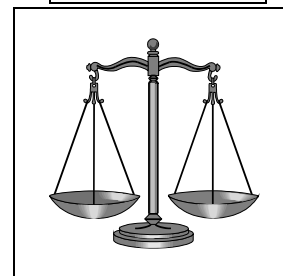
Measures of Capacity

1 cup (c)	=	8 fluid ounces (oz)
1 pint (pt)	=	2 cups (c) or 16 fluid ounces (oz)
1 quart (qt)	=	2 pints (pt) or 4 cups (c)
1 gallon (gal)	=	4 quarts (qt) or 16 cups (c)



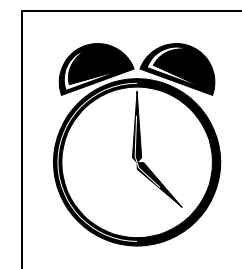
Measures of Weight

1 pound (lb)	=	16 ounces (oz)
1 ton (T)	=	2,000 pounds (lb)



Measures of Time

1 minute (min)	=	60 seconds (s)
1 hour (hr)	=	60 minutes (min)
1 day (d)	=	24 hours (hr)
1 week (wk)	=	7 days (d)
1 month (mo)	=	28 to 31 days (d)
1 year (yr)	=	12 months (mo)
1 century (cen)	=	100 years (yr)



Measures of Money

1 nickel	=	5 pennies
1 dime	=	10 pennies or 2 nickels
1 quarter	=	25 pennies
1 dollar	=	100 pennies or 20 nickels or 10 dimes or 4 quarters

