Dimensional Analysis Quiz (A)

Name:

Block:

Conversions (for your convenience)		
1 hour = 60 minutes	1 mile = 5280 feet	1 yard = 3 feet
1 meter = 3.28 feet	1 km = 0.62 miles	1 light second = 300,000,000 meters
1 kg = 2.2 lbs	1 lb = 0.45 kg	1 quart = 0.946 liters
1 m/s = 2.2 miles/hour	1 foot = 12 inches	1 gallon = 3.78541 liters
1000 m = 1 kilometer	1000 mm = 1 meter	1 inch = 2.54 cm = 25.4 mm
10 mm = 1 centimeter	1 minute = 60 seconds	100 cm = 1 meter

Convert the following quantities using Dimensional Analysis and showing ALL of your work including the units.

1. 75 kg = _____ pounds

2. 2 years = _____ seconds

3. $36\ \frac{\text{Killometers}}{\text{liter}} = \_\_\_\_\_\ \frac{\text{miles}}{\text{gallon}}$

4. Jamaican sprinter, Usain Bolt, holds the world record for the 100 meter dash at 9.58 seconds. How fast was he running in miles per hour?

Dimensional Analysis Quiz (B)

Name:

Block:

Conversions (for your convenience)		
1 hour = 60 minutes	1 mile = 5280 feet	1 yard = 3 feet
1 meter = 3.28 feet	1 km = 0.62 miles	1 light second = 300,000,000 meters
1 kg = 2.2 lbs	1 lb = 0.45 kg	1 quart = 0.946 liters
1 m/s = 2.2 miles/hour	1 foot = 12 inches	1 gallon = 3.78541 liters
1000 m = 1 kilometer	1000 mm = 1 meter	1 inch = 2.54 cm = 25.4 mm
10 mm = 1 centimeter	1 minute = 60 seconds	100 cm = 1 meter

Convert the following quantities using Dimensional Analysis and showing ALL of your work including the units.

1. 148 pounds= _____ Kilograms

2. 604,800 seconds = _____ days

3. 42 $\frac{\text{Killometers}}{\text{liter}}$ = _____ $\frac{\text{miles}}{\text{gallon}}$

4. Jamaican sprinter, Usain Bolt, holds the world record for the 100 meter dash at 9.58 seconds. How fast was he running in miles per hour?