

1) A) 34 eggs = ? dozen

1 dozen = 12 eggs

$$\left(\frac{34 \text{ eggs}}{1} \right) \left(\frac{1 \text{ dozen eggs}}{12 \text{ eggs}} \right) = 2.8 \text{ dozen}$$

B) 25 dozen marbles = ? marbles

1 dozen = 12 marbles

$$\left(\frac{25 \text{ dozen marbles}}{1} \right) \left(\frac{12 \text{ marbles}}{1 \text{ dozen marbles}} \right) = 3.0 \times 10^2 \text{ marbles}$$

2) A) ? m = 4.22 Km

1 Km = 1000 m

$$\left(\frac{4.22 \text{ Km}}{1} \right) \left(\frac{1000 \text{ m}}{1 \text{ Km}} \right) = 4220 \text{ m}$$

B) ? Km = 65,300 m

1 Km = 1000 m

$$\left(\frac{65,300 \text{ m}}{1} \right) \left(\frac{1 \text{ Km}}{1000 \text{ m}} \right) = 65.3 \text{ Km}$$

3) A) ? miles = 7.5 gallons

1 gallon = 28.6 miles

$$\left(\frac{7.5 \text{ gallons}}{1} \right) \left(\frac{28.6 \text{ miles}}{1 \text{ gallon}} \right) = 210 \text{ miles}$$

3) B) ? gallons = 6,435 miles
 1 gallon = 28.6 miles

$$\left(\frac{6435 \text{ miles}}{1} \right) \left(\frac{1 \text{ gallon}}{28.6 \text{ miles}} \right) = 225 \text{ gallons}$$

4) A) ? moles doughnuts = 4.2×10^{22} doughnuts
 1 mole = 6.02×10^{23} particles

$$\left(\frac{4.2 \times 10^{22} \text{ doughnuts}}{1} \right) \left(\frac{1 \text{ mole doughnuts}}{6.02 \times 10^{23} \text{ doughnuts}} \right) = .070 \text{ mole doughnuts}$$

B) ? fish = 3 moles fish

1 mole fish = 6.02×10^{23} fish

$$\left(\frac{3 \text{ moles fish}}{1} \right) \left(\frac{6.02 \times 10^{23} \text{ fish}}{1 \text{ mole fish}} \right) = 2 \times 10^{24} \text{ fish}$$

5) A) ? Acres = 26,000 cars

1 acre = 120 cars

$$\left(\frac{26,000 \text{ cars}}{1} \right) \left(\frac{1 \text{ acre}}{120 \text{ cars}} \right) = 220 \text{ acres}$$

B) ? cars = .45 acre

1 acre = 120 cars

$$\left(\frac{.45 \text{ acre}}{1} \right) \left(\frac{120 \text{ cars}}{1 \text{ acre}} \right) = 54 \text{ cars}$$