conversions extra practice 4

Name: _____ Per: _____ Due: 9/19/2014

irections: Show all work including labels. Round to the correct number of significant figures.

1. 7.5 g to dg

2. 8.9 oz to g

3. 9 cm to m

4. 2.3 m to in

5. 15 mL to L

6. 34,000 mL to gal

7. If you eat 3.2 "quarter pounder" burgers from McDonalds, how many grams of beef did you have? Note: Assume the patty is exactly 0.25 lbs.

8. What is the area of a baseball diamond in acres? (A baseball diamond is a square whose side is 1080 inches in length)
1 acre = 43560 square feet

9. The total amount of fresh water on earth is estimated to be 3.73×10^8 km^3. What is this volume in cubic meters?

10. Convert your answer to number 9 into Liters.

Challenge Problem: If the RDA for vitamin C is 60. mg per day and there are 70. mg of vitamin C per 100. g of orange, how many 3.0 oz. oranges would you have to eat each week to meet this requirement?

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irections: Show all work including labels. Round to the correct number of significant figures.

1. 7.5 g to dg

$7.5\,g \left| \frac{1\,dg}{10^{-1}\,g} \right| =$ calc→ 75 **75 dg**

2. 8.9 oz to g

$8.9\,oz \left| \frac{0.0625\,lb}{1\,oz} \right| \left| \frac{453.6\,g}{1\,lb} \right| =$ calc→ 252.315 **250 g**

3. 9 cm to m

$9\,cm \left| \frac{1\,m}{100\,cm} \right| =$ calc→ 0.09 **0.09 m**

4. 2.3 m to in

$2.3\,m \left| \frac{100\,cm}{1\,m} \right| \left| \frac{1\,in}{2.54\,cm} \right| =$ calc→ 90.5511811 **91 in**

5. 15 mL to L

$15\,mL \left| \frac{1\,L}{1000\,mL} \right| =$ calc→ 0.015 **0.015 L**

6. 34,000 mL to gal

$34{,}000\,mL \left| \frac{1\,L}{1000\,mL} \right| \left| \frac{1\,qt}{0.9464\,L} \right| \left| \frac{1\,gal}{4\,qt} \right| =$ calc→ 8.985 **9.0 gal**

7. If you eat 3.2 "quarter pounder" burgers from McDonalds, how many grams of beef did you have? Note: Assume the patty is exactly 0.25 lbs.

$3.2\,burgers \left| \frac{0.25\,lbs}{1\,burger} \right| \left| \frac{453.6\,g}{1\,lb} \right| =$ calc → 362.88 g **360 g**

8. What is the area of a baseball diamond in acres? (A baseball diamond is a square whose side is 1080 inches in length)
1 acre = 43560 square feet

area = $1080^2\,in^2$ ---→ $1080^2\,in^2 \left| \frac{1^2\,ft^2}{12^2\,in^2} \right| \left| \frac{1\,acre}{43560\,ft^2} \right| =$ Calc→ 0.1859 **0.186 acres**

L x W

9. The total amount of fresh water on earth is estimated to be $3.73 \times 10^8\ km^3$. What is this volume in cubic meters?

$3.73 \times 10^8\,km^3 \left| \frac{1000^3\,m^3}{1^3\,km^3} \right| =$ calc→ 3.73×10^{17} **$3.73 \times 10^{17}\,m^3$**

10. Convert your answer to number 9 into Liters.

$3.73 \times 10^{17}\,m^3 \left| \frac{100^3\,cm^3}{1^3\,m^3} \right| \left| \frac{1\,mL}{1\,cm^3} \right| \left| \frac{1\,L}{1000\,mL} \right| =$ calc → 3.73×10^{20} **$3.73 \times 10^{20}\,L$**

Challenge Problem: If the RDA for vitamin C is 60. mg per day and there are 70. mg of vitamin C per 100. g of orange, how many 3.0 oz. oranges would you have to eat each week to meet this requirement?

$1\,week \left| \frac{7\,days}{1\,week} \right| \left| \frac{60.\,mg\,vitC}{1\,day} \right| \left| \frac{100.\,g\,orange}{70.\,mg\,vitC} \right| \left| \frac{1\,lb}{453.6\,g} \right| \left| \frac{1\,oz}{0.0625\,lb} \right| =$ calc → 21.16 oz of orange / 3.0 oz per orange

8 oranges