



Chem Skills Worksheet #8: Dimensional Analysis

16 oz = 1 lb	1 in = 2.54 cm	2000lbs = 1 ton	15 birds = 1 dog
1oz = 28.35 g	1 ft = 12 in	1 cm ³ = 1 mL	6 birds = 1 cat
1kg = 2.2 lbs	1 mile = 1.61 km	1 gallon = 4 qts	4 birds = 1 frog
1 L = 1.06 qts	1 mile = 1760 yds		

1. 3.61 lbs to kg $3.61 \text{ lbs} \times 1\text{Kg}/2.2\text{lbs} =$ 1.64 Kg
2. 0.43 oz to grams
3. 860.0 g to pounds (lbs) $860.0\text{g} \times 1\text{oz}/28.35\text{g} \times 1 \text{ lb}/16\text{oz} =$ 1.896 lbs
4. 4760 kg to tons
5. 83.6 in to cm $83.6\text{in} \times 2.54\text{cm}/\text{in}$ 212 cm
6. 713 ft to meters
7. 27.3 m to in. $27.3\text{m} \times 100\text{cm}/1\text{m} \times 1\text{in}/2.54 \text{ cm} =$ 1.07×10^3
8. 0.635 mm to inches
9. 3.17 gal to liters $3.17 \text{ gal} \times 4\text{qts}/1\text{gallon} \times 1\text{L}/1.06 \text{ qts} =$ 12.0 L
11. 0.821 qts to ml $821 \text{ qts} \times 1\text{L}/1.06\text{qts} \times 1000\text{mL}/1\text{L} =$ 775 mL
12. 81.6 ml to qts
13. 30.2 L to gal $30.2\text{L} \times 1.06\text{qts}/1\text{L} \times 1\text{gallon}/4\text{qts} =$ 8.00 gal
14. 54.5cm³ to mL
15. 150.0 cm³ to Liters $150.0 \text{ cm}^3 \times 1\text{mL}/1\text{cm}^3 \times 1\text{L}/1000\text{mL} =$.1500L
16. 243 cm³ to dm³
17. 7 dogs to cats $7\text{dogs} \times 15 \text{ birds}/1\text{dog} \times 1\text{cat}/6 \text{ birds} =$ (counting, no sig figs) 18 cats
18. 4 cats to frogs
19. 3 frogs to dogs $3\text{frogs} \times 4\text{birds}/1\text{frog} \times 1\text{dog}/15 \text{ birds} =$ (.8) 1 dog

Name _____

Date _____

Period _____