

Dimensional Analysis Practice Part II

1. $\frac{10 \text{ inches}}{1} \times \frac{2.54 \text{ cm}}{1 \text{ inches}} = 25.4 \text{ cm}$
2. $\frac{110 \text{ mi}}{1} \times \frac{1.6 \text{ km}}{1 \text{ mi}} = 176 \text{ km}$
3. $\frac{90 \text{ km}}{1} \times \frac{.6 \text{ mi}}{1 \text{ km}} = 56 \text{ mi}$
4. $\frac{100 \text{ yd}}{1} \times \frac{.91 \text{ m}}{1 \text{ yd}} = 91 \text{ m}$
5. $\frac{40 \text{ K}}{1} \times \frac{1 \text{ gal}}{3.78 \text{ K}} = 10.6 \text{ gal}$
6. $\frac{40 \text{ gal}}{1} \times \frac{3.78 \text{ L}}{1 \text{ gal}} = 151 \text{ L}$
7. $\frac{16 \text{ g}}{1} \times \frac{28 \text{ g}}{1 \text{ g}} = 448 \text{ g}$
8. $\frac{25 \text{ lbs}}{1} \times \frac{454 \text{ g}}{1 \text{ lbs}} = 11350 \text{ g}$
9. $\frac{2.5 \text{ lbs}}{1} \times \frac{1 \text{ kg}}{2.2 \text{ lbs}} = 1.1 \text{ kg}$
10. $\frac{10 \text{ kg}}{1} \times \frac{2.2 \text{ lbs}}{1 \text{ kg}} = 22 \text{ lbs}$
11. $\frac{1500 \text{ m}}{1} \times \frac{1 \text{ km}}{1000 \text{ m}} \times \frac{1 \text{ mi}}{1.6 \text{ km}} = .94 \text{ mi}$

$$12. \frac{20 \text{ gal}}{1} \times \frac{3.78 \text{ L}}{1 \text{ gal}} = 75.6 \text{ L}$$

$$13. \frac{2 \text{ ton}}{1} \times \frac{907 \text{ kg}}{1 \text{ ton}} = 1814 \text{ kg}$$

$$14. \frac{183 \text{ cm}}{1} \times \frac{1 \text{ inches}}{2.54 \text{ cm}} = 72 \text{ inches}$$

$$\star 15. \frac{2 \text{ cups}}{1} \times \frac{1 \cancel{\text{K}}}{4.23 \cancel{\text{cups}}} \times \frac{10 \text{ dL}}{1 \cancel{\text{K}}} = 4.7 \text{ dL}$$

$$16. \frac{7 \text{ mi}}{1} \times \frac{1.6 \text{ km}}{1 \text{ mi}} = 11.2 \text{ km}$$

BONUS:

$$\frac{15 \text{ friends}}{1} \times \frac{4 \text{ slices}}{1 \text{ friend}} \times \frac{1 \text{ pizza}}{12 \text{ slices}} = 5 \text{ pizzas}$$

$$\underline{\underline{\text{Cost}}} = 5 \text{ pizzas} \times \$9.99 = \$49.95$$