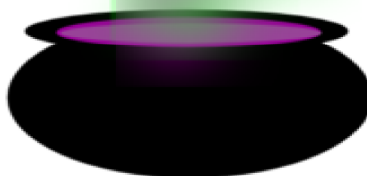


Metric Measurement #3



ANSWERS

Using the chart below, answer the following questions.

American

Metric

1 ounce (oz) = 28.35 grams (g)
1 pound (lb) = .45 kilograms (kg)

Metric

American

1 gram (g) = .035 ounces (oz)
1 kilogram (kg) = 2.21 pounds (lb)

1. A witch is creating potions. She makes one 4 ounce potion. How many grams is the potion?

Since 1oz = 28.35g, multiply by 4:

$$4 \times 1\text{oz} = 4 \times 28.35\text{g}$$

$$4 \text{ oz} = 113.4\text{g}$$

$$\begin{array}{r} 28.35 \\ \times 4 \\ \hline 113.40 \end{array}$$

2. She makes another potion that is .225 kilograms. How many pounds is the potion?

Since 1kg = 2.21lb, multiply by .225:

$$.225 \times 1\text{kg} = .225 \times 2.21\text{lb}$$

$$.225\text{kg} = .497\text{lb}$$

$$\begin{array}{r} .225 \\ \times 2.21 \\ \hline 225 \\ 450 \\ 450 \\ \hline .49725 \end{array}$$

3. The witch then makes a potion that weighs 85 grams. How many ounces is the potion?

Since 1g = .035oz, multiply by 85:

$$85 \times 1\text{g} = 85 \times .035\text{oz}$$

$$85\text{g} = 2.975\text{oz}$$

$$\begin{array}{r} .035 \\ \times 85 \\ \hline 175 \\ 280 \\ \hline 2.975 \end{array}$$

4. She makes a large batch of witch's brew equal to 16 ounces. How many grams of brew are there? How many kilograms of brew are there? (hint: there are 1,000 grams in 1 kilogram)

Since 1oz = 28.35g, multiply by 16:

$$16 \times 1\text{oz} = 16 \times 28.35\text{g}$$

$$16\text{oz} = 453.6\text{g}$$

Since 1,000g = 1kg, divide

$$453.6 \text{ by } 1,000:$$

$$453.6/1,000 = .4536\text{kg}$$

$$\begin{array}{r} 28.35 \\ \times 16 \\ \hline 17010 \\ 2835 \\ \hline 453.60 \end{array}$$