

Name _____

Metric Mass Guided Lesson Explanation

1) We need to find which mass is the largest (highest). As you can see, there are two choices using the same metric units (mg - choice a & d). The remaining choices are in different units (kg and g).

a) 200 mg b) 1.2 kg c) 312 g d) 5,500 mg

Step 1) Compare measures that are in the same units. This will save us some work. Choices a & d are the only choices in the same units.

d) 5,500 mg > ~~a) 200 mg~~ (This leaves us with 3 choices in different units).

Step 2) Put all remaining choices in the same unit. Note: you could convert them to any unit, as long as they are all in the unit of measure. Since the basic unit for mass is grams, let's convert everything to grams.

$$1.2 \text{ kg (convert to grams)} = \frac{1 \text{ kg}}{1.2 \text{ kg}} = \frac{1,000 \text{ g}}{x} \therefore \mathbf{1,200 \text{ grams}}$$

312 g (already in grams)

$$5,500 \text{ mg (convert to grams)} = \frac{1 \text{ g}}{x} = \frac{1,000 \text{ mg}}{5,500 \text{ mg}} \therefore 5.5 \text{ grams}$$

We can see that choice b) 1.2 kg is clearly the largest value.

2) Since the value we are given basically differs by metric unit, it's best to answer this question by understanding what a single unit of each is an equivalent mass of.

1 mg is the mass of a grain of sand

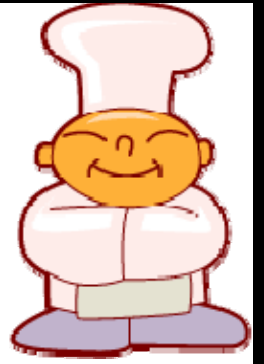
1 g is the mass of a feather

1 kg is the mass of a pineapple

With these mass values in mind, we can easily see that mg and kg are not realistic for the mass of strawberry, grams fit nicely. Our answer will be: 25 g



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3) Part 1: We have 14,850 cg and we need to convert that to grams. We know that 1 gram has 100 centigrams in it. We would just run a quick cross-multiplication to find the answer to the first part:

$$\frac{1 \text{ g}}{x} = \frac{100 \text{ cg}}{14,850 \text{ cg}} \therefore 14,850 = 100x = 148.5 \text{ grams}$$

Part 2: Chef Socchi needs 325 grams of flour, but we only have 148.5 grams of flour. (148.5 g < 325 g) No, the Chef will not have enough flour.

