

## Real-Life Word Problems

The Center for Disease Control (CDC) recommends that many people take a flu shot during each flu season. When I took my flu shot earlier this year, I asked the nurse two questions: “What is the dosage of medicine in each flu shot?” and “How many flu shots do you give each season?” She answered, “Zero point five cc’s, and about 500 shots.”

Knowing this, which of the following is the best estimate of how much flu vaccine she will need this season?

- a.) One gallon (about 3.785 liters)
- b.) 20 fl oz (591 ml - the amount in many plastic cola bottles)
- c.) 12 fl oz (355 ml – the amount in most cans of cola)
- d.) 1 cup (8 fl oz, or 236.59 ml)

Answer:

Since one cubic centimeter (cc) is the same as one milliliter (ml), the math looks like this:

$$0.5 \text{ cc} = 0.5 \text{ ml, so... } \frac{0.5 \text{ ml}}{\text{shot}} \times 500 \text{ shots} = 250 \text{ ml of flu vaccine.}$$

So if you are looking for the closest estimate, as the problem asked, the answer is “d.)”

But if you are asked how much she should order, the answer is “c.)” It will be better to order a little too much, than to not order enough and have to turn people away.

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While shopping in Wal-Mart, I picked up a six-pack of Coca-Cola, marked \$3.00. Each bottle was 24 ounces. As I went through the register, I decided to buy a cold Coke from the cooler display. My semi-cold pop cost \$1.38, and contained 20 ounces.

- a.) How much did I pay (not counting tax) for **each** of my warm colas? \_\_\_\_\_
- b.) How much would I have paid for six cold drinks? \_\_\_\_\_
- c.) How much, per ounce, did I pay for each bottle? 24 Ounce (warm) \_\_\_\_\_ 20 Ounce (cold) \_\_\_\_\_

Answers:

- a.) \$.50 (fifty cents)
- b.) \$8.28
- c.) \$.02/oz and \$.07/oz, respectively