

## Answer on Question #54096 – Chemistry – Organic Chemistry

### Question:

11. Amoxicillin, 500 mg/10 ml, #150 ml,

Sig: 1 tsp po tid until all gone.

A. How many grams of amoxicillin are in 150 ml?

B. How many doses will be dispensed in all and what is the day's supply?

### Solution

Lets make proportion:

If 500 mg in 10 ml

then x mg in 150 ml

$$x = \frac{150 \cdot 500}{10} = 7500 \text{ mg or } 7.5 \text{ grams}$$

The metric teaspoon as a unit of measure is 5 ml, so medicine will be divided in:

$$\text{doses} = \frac{150}{5} = 30$$

Patient will drink 5ml of amoxicillin 3 times in a day ( $5 \cdot 3 = 15$  ml summary). So make another proportion:

If 500 mg in 10 ml

then x mg in 15 ml

$$\text{Day's supply of amoxicillin (in mg)} = \frac{500 \cdot 15}{10} = 750 \text{ mg}$$

**Answer:** A. 7.5 grams, B 30 doses; 15 ml of solution or 750 mg of amoxicillin