

Numbers and Operations: Family Physician

Idaho Physicians Associates

Job Description: Educate patients on wellness issues, diagnose and treat patients as problems occur.

Problem:

A child has a middle ear infection requiring an antibiotic that is dosed at 60 mg per kg a day and divided into 3 doses per day. The medication is supplied as a suspension, 250 mg / 5 ml.

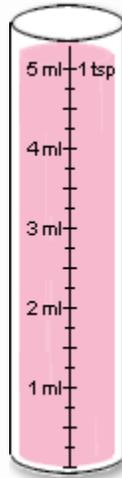
1. How many teaspoons is each dose for a child weighing 48 pounds?
2. How many ounces of medicine should the pharmacist dispense for an 8 day course of treatment?

Facts needed:

$$2.2 \text{ lbs} = 1 \text{ kg}$$

$$1 \text{ oz} = 6 \text{ teaspoons}$$

$$1 \text{ teaspoon} = 5 \text{ ml}$$



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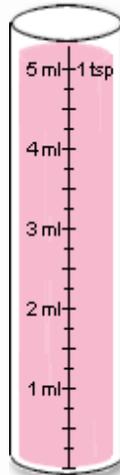
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Solution:

1. How many teaspoons per dose?

$$48 \text{ lb} \div 2.2 \text{ lbs/kg} = 21.8181 \text{ kg} \times 60 \text{ mg/kg} = 1309.09 \text{ mg per day}$$

$$1309.09 \text{ mg} \div 3 \text{ doses} = 436.36 \text{ mg per dose}$$

$$250 \text{ mg of medication in } 5 \text{ ml} / 1 \text{ tsp} = 5 \text{ ml} = 250 \text{ mg of medication}$$

$$436.36 \text{ mg} \div 250 \text{ mg/tsp} = 1.7454545 = 1.75 \text{ teaspoons per dose}$$

2. How many ounces of medicine for 8 days of treatment?

$$3 \text{ doses/day} \times 8 \text{ days} \times 1.75 \text{ tsp/dose} = 42 \text{ tsp of medicine}$$

$$42 \text{ tsp} \div 6 \text{ tsp/ounce} = 7 \text{ ounces of medicine}$$