



Medical Math Problems

Convert these grams to kilograms:

200 grams to kilograms: _____

1000 grams to kilograms: _____

23 grams to kilograms: _____

124.3 grams to kilograms: _____

Round up the following to whole numbers only:

13.6 _____

158.4 _____

27.589 _____

Problem One:

An Eastern Cottontail Rabbit weighing 1 kilogram was brought to you with a leg injury. Your veterinarian prescribed TMP (Bactrim) at a dose rate of 30 mg/kg given PO, Q12. The bottle on your shelf has a medication concentration of 48 mg/ml. How much and how often should you administer TMP to your rabbit?

Answer: _____

Problem Two:

An Eastern Cottontail bunny weighing 55 grams was brought to you with a leg injury. Your veterinarian prescribed TMP (Bactrim) at a dose rate of 30 mg/kg given PO, Q12. The bottle on your shelf has a medication concentration of 48 mg/ml. How much and how often should you administer TMP to your rabbit?

Answer: _____

Problem Three:

Your 55-gram bunny with the leg injury appears to be in pain. Your veterinarian has already closed for the day. You have a bottle of Meloxicam on your shelf. Your formulary indicates that the dose rate of .5 mg/kg is appropriate. The bottle of Meloxicam on your shelf has a medication concentration of 1.5 mg/ml. How much Meloxicam can you safely give your bunny tonight?

Answer: _____

Problem Four:

Jim has a Southern Flying Squirrel weighing 84 grams with a respiratory infection due to being fed by the public. After consulting with his veterinarian, it was decided to treat the Southern Flying Squirrel with Doxycycline. Jim has a NWRA Wildlife Formulary and checks it. The formulary indicates 5 mg/kg PO, q12-q24 is the appropriate dose for a rodent. Jim has an oral suspension of Doxycycline. The bottle indicates it is a concentration of 10 mg/ml. Based on the above data, how much and how often should Jim give Doxycycline to his flyer?

Answer: _____

Problem Five:

Arthur has trouble with medical math and wants his friend, Gus to check his math. He has a raccoon that weighs about 2 pounds. He plans on giving Bactrim (TMP) and is following the dose rate chart his veterinarian gave him for a dose rate of 25 mg/kg, PO, Q12. His veterinarian listed the Bactrim as 50 mg/ml concentration.

This is his math:

$2 \times 25 / 50 = 1$ ml to administer to his raccoon. Is his math correct? Circle "yes" or "no"

What would be the correct dose if the raccoon weighs one kilogram?

Answer: _____

Problem Six:

Jim has a best friend rehabber buddy named Carol. Carol also has a Southern Flying Squirrel that weighs 84 grams and has a respiratory infection. Carol has not learned medical math so she asks Jim how much Doxycycline she should give her squirrel. The Formulary indicates that the Doxycycline should be dosed at 5 mg/kg, PO, q12-24 for rodents. What important question should Jim ask her?

- ▶ Jim doesn't assume that Carol has the same Doxycycline that he has. He asks Carol about her medication. Carol has tablets instead of a liquid suspension. The tablets are 20 mg each.
- ▶ What is the dose of medication that Carol should give her little Flyer if she dissolves the Doxycycline tablet in 1 ml of water.

Answer: _____

Solids to Liquids Practice:

A 15 mg tablet dissolved in 1 ml of water has a concentration of: _____

A 250 mg tablet dissolved in 5 ml of water has a concentration of: _____

A 250 mg tablet dissolved in 10 ml of water has a concentration of: _____

Problem Seven:

You receive a sweet Rock Dove that was attacked by a cat. There is a puncture wound under the left wing. You decide that the Rock Dove needs Clavamox to prevent infection. You have cleaned the wound and weighed the bird. Here are your facts:

- ▶ 1. Your Clavamox is a liquid suspension of 62.5 mg/ml
- ▶ 2. The Rock Dove weighs 230.4 grams
- ▶ 3. The Clavamox dose rate for a bird over 150 grams is 125 mg/kg PO q12

How much Clavamox should you give your Rock Dove per dose?

Answer: _____

Problem Eight:

You happily receive a Snapping Turtle that needs pain medication. You weigh the turtle and find it weighs a hefty 4.2 kilograms. You have Meloxicam on your shelf and check your Formulary for turtle dose rates. It is recommended to dose the turtle at .2 mg/kg. Your Meloxicam has a medication concentration of 5 mg/ml injectable solution. How much Meloxicam should you give your Snapping Turtle to ease the pain?

Answer: _____

Dilution Practice Time:

Do a 10 percent dilution for these medications:

Ivermectin: Your medical math gave a dose of .006. Do a ten percent dilution.

Mix ____ ml Ivermectin with ____ ml Propylene Glycol

New medication dose with a 10 percent dilution is: _____

Meloxicam: Your medical math gave a dose of .004. Do a ten percent dilution.

Mix ____ ml Meloxicam with ____ ml water

New medication dose with a 10 percent dilution is: _____

Problem Nine:

You recently received an infant Eastern Chipmunk with severe diarrhea that was determined to have coccidia based on a fecal examination. You have a bottle of Toltrazuril (Baycox) on your shelf. Your sickly chipmunk has a weight of 35 grams. Your Formulary recommends a dose rate of 10 mg/kg PO q24 x 3d on, 3d off, 3d on. The Toltrazuril on your shelf has a medication concentration of 50 mg/ml. What amount of Toltrazuril should you give?

What is the dose with your medical math calculations: _____

What is the dose with a 10 percent dilution: _____