

2014 Washington State FFA Veterinary Science CDE Math Practicum

1. Your busy rural practice offers farm call services. Today you will be visiting a farm in the neighboring town to examine and vaccinate 3 horses. The farm is located 15 miles from your clinic. While you are there, the client would like you to examine and vaccinate his dog as well. All three of the horses will receive a 5-way vaccine, and a West Nile vaccine. One of the horses will also receive a strangles vaccine. The dog is due for his distemper/parvo vaccine (DHPP), and a rabies vaccine. Before you head out the door, the client calls and would like an estimated cost for the services you will be providing today. Estimate the bill for the client using the following fee schedule:

Mileage fee: \$1.50 per mile
Canine Pre-vaccination Examination: \$20
Feline Pre-vaccination Examination: \$23
Equine Pre-vaccination Examination: \$25
5-Way horse vaccine: \$25
West Nile vaccine: \$15
Strangles vaccine: \$15
DHPP vaccine: \$22
FVRCP vaccine: \$22.50
Rabies vaccine: \$28.00

- A. 305.50
- B. 299.50
- C. \$302.50**
- D. 300.00

2. You would like to treat a young cat for an intestinal parasite with “Coccidia-no-More,” a liquid medication. The medication is stored in your pharmacy in a bottle labeled as 250 mg/5mL. The cat will need to be treated once daily by mouth for 14 days. His daily dose is 25 mg. You write a prescription for your tech to fill. What does it look like?

- A. Coccidia-no-More 0.5 mL P.O. SID x 14 days**
- B. Coccidia-no-More 1 mL P.O. SID x 14 days
- C. Coccidia-no-More 5 mL P.O. SID x 14 days
- D. Coccidia-no-More 0.5 mL P.O. BID x 14 days

3. A client calls to report that her small dog was stung by a bee and is experiencing some mild swelling around the site of the sting. This happened last summer, and your clinic had instructed her to give the dog a dose of liquid diphenhydramine, an over the counter antihistamine. It worked very well last summer, and she would like to give diphenhydramine again now, but she can't recall the dose. She has a dosing syringe available. Her dog weighs exactly 12.5 pounds, and the dose of this antihistamine is 1 mg/lb. The medication is labeled to contain 12.5 milligrams per teaspoon. How many milliliters does she need to draw up for this dog?

- A. 5 mL
- B. 15 mL
- C. 12.5 mL
- D. 1 mL

4. You would like to give dog a once daily probiotic gel to help him recover from an episode of severe intestinal disease. The probiotic comes in a pre-filled syringe that contains 15 total grams. The dose is 1 gram per 10 pounds. This dog weighs 30 pounds. How many syringes will you need to send home with this client to make sure there is enough to treat the dog every day for 10 days?

- A. 1 tube
- B. 2 tubes**
- C. 3 tubes
- D. 4 tubes

5. You write the following prescription and ask your technician to prepare the medication for dispensing. How many tablets will she need to count out and record in the controlled substance log?
Rx: Diazepam 10mg, give two tablets P.O. TID x 7 days.

- A. 24
- B. 42**
- C. 28
- D. 14

6. The veterinarian asks the technician to set the IV fluid pump alarm to go off after a patient has had 300 milliliters of fluids. The fluid rate for this patient is 50 mL/hr. It is 8:00am. What time will the technician expect the fluids to run out and the alarm to go off?

- A. noon
- B. 5pm
- C. 11am
- D. 2pm**

7. You diagnose a litter of six kittens with a bacterial upper respiratory infection. Three kittens need 0.2 mL of a liquid antibiotic and three kittens need 0.3 mL of the same antibiotic. All of the kittens will receive the antibiotic dose orally every 12 hours for 10 days. The antibiotic only comes in a 15 mL bottle. How many bottles will the owner need to purchase to make sure all six kittens receive their entire course of treatment?

- A. 1 bottle
- B. 2 bottles**
- C. 3 bottles
- D. 4 bottles

8. You diagnose a herd of sheep with an intestinal parasite that can be treated easily with a medication added to the water. In order to be effective, 60 milliliters must be added to every 10 gallons of water. The client has a 100 gallon trough. You send him home with the medication, instructions, and a large dosing syringe to measure the medication. He calls you from his home an hour later to say he has somehow misplaced the syringe, but that he does have a measuring cup labeled with ounces. He really doesn't want to drive all the way back to the clinic for a new syringe. Calculate the dose of medication in ounces that he needs to add to his 100 gallon trough.

- A. 20 oz**
- B. 40 oz
- C. 30 oz
- D. 60 oz

9. You are drawing up an antibiotic that will be given intravenously to a dog during an orthopedic surgery. The dose is approximately 1mL/10lbs. The dog weighs 62lbs. How much of the antibiotic do you need to draw up to treat this dog appropriately?

- A. 0.62 mL
- B. 33 mL
- C. 3.3 mL
- D. 6.2 mL**

10. A frantic owner calls you seeking help for her dog who just ingested a large amount of bakers chocolate. She lives an hour away from your clinic. You advise the owner to administer 15 mL of hydrogen peroxide to her dog to induce vomiting, and then bring the dog in to the clinic for an evaluation. The owner doesn't have anything in which to measure milliliters. She does have a set of measuring spoons. Which measuring spoon should she fill to give the dog approximately 15 mL of hydrogen peroxide?

- A. 1 TBS**
- B. 1 tsp
- C. ½ TBS
- D. ½ tsp

11. Your clinic has a boarding facility attached. A client is interesting in boarding her dogs, Bowser and Kujo, for a week. Bowser is an 80 pound black lab, and Kujo is a 5 pound chihuahua. They cannot share the same kennel run because Kujo is mean to Bowser. In addition, Bowser takes a thyroid medication twice daily and Kujo eats a special diet that the client would like to provide. The client would also like both dogs bathed, and Kujo's toenails trimmed while they are being boarded. The client would like to know what it will cost to board both dogs and have the grooming services that she is interested in. Use the following fee schedule to give her an estimate.

General Boarding Fees

Dogs 0-20 lbs: \$10 per day

Dogs 21-50 lbs: \$15 per day

Dogs 51-100 lbs: \$20 per day

Dogs 100 lbs and over: \$25 per day

Additional Services

Administration of medication: \$1.00 per day

Bathing: \$10

Toenail trim: \$5

Pluck ears: \$2

Check anal glands: \$3

Shavedown: \$60

Discounts

kennel sharing: \$3 per dog/per day discount

owner provides food: \$2 per dog/per day discount

- A. \$242
- B. \$233
- C. \$228**
- D. \$200

12. You are calculating a dose of medication for a horse on a farm call, and you neglected to bring your calculator. The horse weighed 1000 lbs on the weight tape, and the medication is dosed at 3 mg/kg. Estimate the dose of medication needed.

- A. approximately 1000 mg
- B. approximately 500 mg
- C. approximately 1500 mg**
- D. approximately 3000 mg