Cypress Creek FFA Invitational

Veterinary Science Math Application

1) Ace is a 56 lb dog that has been diagnosed with a severe allergic reaction. The veterinarian is prescribing Ace, a steroid known as Prednisone at a rate of 2.2mg/kg/day to be administered BID for 4 days and then 1.1mg/kg/day BID for 3 additional days. Prednisone is available in 20mg tablets. What is the dog's weight in kilograms (rounded to the nearest tenth)?

   a) 24.9 kg
   b) 22.4 kg
   c) 25.5 kg
   d) 26.5 kg

2) Use your answer from the problem above to solve this problem. Ace is a 56lb dog that has been diagnosed with a severe allergic reaction. The veterinarian is prescribing Ace, a steroid known as Prednisone at a rate of 2.2mg/kg/day to be administered BID for 4 days and then 1.1mg/kg/day BID for 3 additional days. Prednisone is available in 20mg tablets. What is the daily dose required for the first 4 days (rounded to the nearest whole number)?
   a) 108mg/day
   b) 114 mg/day
   c) 110 mg/day
   d) 112 mg/day

3) Use your answer from the problem above to solve this problem. Ace is a 56 lb dog that has been diagnosed with a severe allergic reaction. The veterinarian is prescribing Ace, a steroid known as Prednisone at a rate of 2.2mg/kg/day to be administered BID for 4 days and then 1.1mg/kg/day BID for 3 additional days. Prednisone is available in 20mg tablets. How many TOTAL tablets are required to complete the treatment (round to nearest tenth)?
   a) 30.5 tablets
   b) 30.9 tablets
   c) 31.0 tablets
   d) 30.8 tablets

4) You purchase a box of 48 heartworm tests at a cost of $876.00. What is the cost to the client for a single test with a hospital markup of 60%?
   a) $28.45
   b) $29.09
   c) $28.12
   d) $29.20

5) Your practice purchased a therapy laser for $25,375. You have been asked to set up a price to charge for each therapy session. If you are expecting to average 4 sessions per day in a 30-day month, what would the price per therapy session be in order to pay off the initial cost of the machine in a 24 month period with an additional 75% markup to cover utilities, labor, and repairs?
   a) $15.42
   b) $13.95
   c) $10.05
   d) $14.40