Q 9

**Kg=1000 gm. &Gm. =1000 Milligram (Mg) & Mg=1000 Microgram (Mcg/Ug)**

**Tablespoon=3 teaspoon**

**1 cc = 0.033 OZ, Ounce, and Fl**

**1 cc = 1 Milliliter (ml)**

**1 liter = 1000 milliliter**

**I kg = 2.2 lbs.**

**1% solution means each 1 gm in 100 ml**

**5% solution means each 5 gm in 100 ml**

**1 to 10 means that for every 1 ml of betadine, there are 9 ml of water**

**BID = Twice daily**

**SID = once daily**

**Milliequivalents Per Liter (mEq/L**): Some medical tests report results in milliequivalents per liter (mEq/L). An equivalent is the amount of a substance that will react with a certain number of hydrogen ions. A milliequivalent is one-thousandth of an equivalent. A liter measures fluid volume

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**Page 6:**

**mg = (mEq x atomic weight)/valence**

Atomic weight = molecular weight (MW) Na+ + MW of Cl- = 23g + 35.5g = 58.5g

The **valence** of Na Cl is 1, because Na+ is +1 and Cl- is -1

So: mg = (1 x 58.5)/1 = 58.5

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**Blood transfusion volume (in mL)** = (weight (in kg) x blood volume (in ml/kg) x [desired PCV- actual PCV])/donor PCV

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How much an animal should eat? **Basic Energy Requirement** (BER) Formula:

**Kcal/day= (30× body weight in kg) + 70**

The metabolic requirement of a **severely burned animal** can increase substantially, so multiply **BER * 2**.

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**Total bicarbonate deficit is calculated**:

**Total bicarbonate deficit (in mEq**) = **base deficit ×0.3×Body weight (in kg).** Typically, 1/3 to ½ of the calculated deficit is administered over 5-10 min and then the remaining is administer over following 12-24 hours.

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## equation to calculate rehydration volume in a dehydrated animal

**Fluid deficit calculation**: Body weight (kg) × % dehydration = volume (L) to correct

**body weight [kg] X % dehydration X 1000= ….ml**

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95.Calc 500kg horse, 8%dehydrated, ongoing losses are 50lts. How much fluid
should be given 90, 120 lt, 150lt (40+30+50 lt) (dehydration-8*500/100+60ml/kg/day (60*500/1000) +50lts)

volume to administer (L) = maintenance (60 mL/kg/day) + immediate losses (body wt [kg] ¥
estimate of dehydration) + ongoing losses
Cat 50 ml/kg/day
Dog 90 ml/kg/day

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**How many cows should be in estrus** on any given day in a pen with X (non-pregnant cows)? Divide the X (**number of cows**) by **18 and then by 21 (bovine estrus cycle)** and you will have. Example, if X=100, 100/18=5.5 and 100/21=4.7, **therefore the answer is between 4-6 cows**.

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**The osmole gap** = measured osmolality - calculated osmolality.

Ethylene glycol toxicity is suggested by > 20 mOsm/kg osmole gap.

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**cardiac output (CO)**= heart rate (HR) X stroke volume (SV)

**Pulse pressure (PP)=** S-D

**mean arterial pressure (MAP)** = ⅓ (systolic – diastolic) + diastolic

**Pulse pressure** = **systolic - diastolic** pressure and determines the strength of
the pulse