

Infusion Calculation

1. Determine the infusion for a _____ lb _____ that is _____% dehydrated.

Compute the replacement volume at 1 liter per 1-kilogram body weight. The dehydration rate is reported as a decimal percent.

$$\frac{\text{_____ lb}}{1} \times \frac{1 \text{ kg}}{2.2 \text{ lb}} \times \text{_____} \times \frac{1 \text{ L}}{1 \text{ kg}} \times \frac{1000 \text{ ml}}{1 \text{ L}} = \frac{\text{_____}}{2.2} = \text{_____ ml replacement volume}$$

Then compute the maintenance volume at 40 ml per 1 kilogram. 40 ml per 1 kilogram is an industry standard infusion rate for maintenance.

$$\frac{\text{_____ lb}}{1} \times \frac{1 \text{ kg}}{2.2 \text{ lb}} \times \frac{40 \text{ ml}}{1 \text{ kg}} = \frac{\text{_____}}{2.2} = \text{_____ ml maintenance volume}$$

Compute the total volume by adding the replacement and maintenance volume together.

$$\text{_____ ml replacement volume} + \text{_____ ml maintenance volume} = \text{_____ ml total volume}$$

Compute the milliliters per minute infusion rate by dividing the total volume by 24 hours and 60 minutes.

$$\frac{\text{_____ ml}}{24 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} = \text{_____ ml / min}$$

Compute the drips per minute infusion rate by dividing the total volume by 24 hours and 60 minutes. If the animal is less than 20 lbs body weight, we will use 60 drips per milliliter. If the animal is more than 20 lbs body weight, we will use 15 drips per milliliter.

$$\frac{\text{_____ ml}}{1 \text{ min}} \times \frac{\text{_____ drips}}{1 \text{ ml}} = \text{_____ drips / min}$$

Compute the anesthesia / surgery rate by multiplying the animal's body weight by 4 ml per lb per hour and dividing by 60 minutes.

$$\frac{\text{_____ lb}}{1} \times \frac{4 \text{ ml}}{1 \text{ hr} | 1 \text{ lb}} \times \frac{1 \text{ hr}}{60 \text{ min}} = \text{_____ ml / min}$$