



Math Study Strategies

Math for Nursing Pediatric Medication

Gentamycin 3mg/kg/24 hours is given every eight hours. How much would a child who weighs 24kg receive per dose?

Amount prescribed: **3mg/kg/24 hours**

Time of administration: **every eight hours**

weight of child: **52.8lb**

Start with the prescribed amount: $\frac{3\text{mg}}{\text{kg/day}}$

The child weight is given in **lb** and the prescribed medication is in **mg/kg** body weight. To change the body weight expressed in lb into kg use the ratio.

$$\frac{1\text{kg}}{2.2\text{lb}}$$

Because the medication needs to be administered every 8 hours divide:

$$24 \text{ by } 8 = 3$$

The medication will be administered 3 times a day.

To find out the amount to administer for each dose we use dimensional analysis (da).

$$\frac{3 \text{ mg}}{\text{kg/day}} \times \frac{1 \text{ kg}}{2.2 \text{ lb}} \times \frac{52.8 \text{ lb}}{\text{patient}} \times \frac{1 \text{ day}}{3 \text{ doses}} = \frac{158.4}{6.6} = \frac{24 \text{ mg}}{\text{dose}}$$

Therefore:

The child will receive **24mg of Gentamycin** per dose.