Hello Peers,

For this discussion, we were asked to use Cowling’s Rule to find the correct dosage of medicine for a child per their age. The **formula** for Cowling’s Rule and the variables for this **literal equation** are as followed:

$\frac{d=D\left(a+1\right)}{24}$

* a = child’s age
* D = adult dosage
* d = child’s dose

First, I was assigned the task of calculating the dosage of Tamiflu for an 11-year-old child. I **substituted** the *D* with 75 and the *a* with 11 to **solve** for *a*, which was:

$d=\frac{75\left(11+1\right)}{24}$ (after inserting the substitutions)

$d=\frac{75(12)}{24}$ (after following the order of operations and solving for the parentheses first)

$d=\frac{900}{24}$ (after multiplying the numerator)

*d* = 37.5 (after dividing the numerator by the denominator)

Therefore, the dosage for an 11-year-old child is 37.5mg.

Next, I was asked to find the value of *a*, which is the child’s age using the same formula. For this equation, the adult dosage is 1000mg and the child’s dosage is 600mg. To solve this, I followed the steps in reverse, meaning I multiplied at points where I would have originally divided and subtracted instead of added, which went like this:

*d* = 600 600(24) (multiply the child dose and the number 24)

*D* = 1000 = $\frac{14,400}{1000}$ (divide by the adult dose)

= 14.4-1 (subtract 1)

=13.4 (which gives the age of the child)

*a* = 13

Therefore, the value of *a* (age) is 13, which is a **conditional equation.**

The child is 13 years old.

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