



# Math Study Strategies

## Nursing Math

### Drop Factor in an IV



Using I.V. tubing with a drop factor of 60, find the rate in **cc per hour** and **gtts per minute** (remember that per means division).

#### Given:

500cc's in 24h  
50cc's in 4h

#### Looking for:

cc/h & gtts/min  
cc/h & gtts/min

#### Step 1

We are looking for cc/h. The dimensional analysis will be:

$$\frac{500cc}{1 \cancel{day}} \times \frac{1 \cancel{day}}{24h} = \frac{500}{24} \text{ or } 21 \frac{cc}{h}$$

Cross-cancel diagonally identical units and then multiply.

#### Step 2

$$\frac{60gtts}{1cc} \times \frac{21cc}{h} \times \frac{16}{60min} = \frac{21cc}{h}$$

#### Step 3

Because the IV needs to be administered 4 times a day:

$$\frac{50}{4h} = \frac{?cc}{1h} = \frac{50}{4} = 13 \frac{cc}{h}$$

#### Step 4

$$\frac{60gtts}{cc} \times \frac{13}{h} \times \frac{1h}{60min} = \frac{13gtts}{min}$$

The answers are for **500cc's in 24h** with **60 gtts** factor

1. **21cc/hr**
2. **21gtts/min**

For **50cc's in 4h** and **60 gtts** factor

1. **13 cc/h**
2. **13 gtts/min**

