

Strength vs Dose and Dosage Calculations worksheet

<u>Term</u>	<u>Symbol</u>	<u>Meaning</u>	<u>Example</u>
Dosage ordered (need)	D	The amount of the medication that the health care provider prescribed	Give 1500 milligrams
Strength or supply on Hand (Have)	S	The amount of drug in a specific unit of measure (how the drug comes from the manufacturer)	500 milligram tablets 200 mg/5ml (liquid medication)
Unit of measure or quantity of unit	Q	The unit of measure for the specific dosage strength or supply on hand	Per tablet (1 tablet) Per capsule (1 capsule) Per 5 milliliters (liquid)
Unknown Dosage	X	The dosage you are trying to calculate	

Use a calculator if needed

$$\frac{D}{S} \times Q = X$$

$$\frac{\text{Dose(need)}}{\text{Strength(have)}} \times \text{Quantity} = X$$

Example 1: Ampicillin **500 mg/capsule** is supplied. The Health Care provider orders **1500 mg**. How many capsules should be given to the patient?

D (need) = 1500 mg

S(Have) = 500 mg

Q (Quantity) = in one capsule

$$\frac{1500 \text{ mg}}{500 \text{ mg}} \times 1 \text{ capsule} = X$$

1500 divided by 500 = 3 3 x 1 = 3 You would need 3 capsules

Example 2: The doctor orders **90 milligrams** of liquid cough syrup. The liquid cough syrup has a label that reads **120 milligrams** in **5 milliliters** (120mg/5ml). How much cough syrup should be given to the patient?

D (need) = 90 mg

S (Have) = 120 mg

Q (Quantity) = in 5 mls

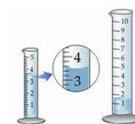
$$\frac{90 \text{ mg}}{120 \text{ mg}} \times 5 \text{ ml} = X$$

90 divided by 120 = .75 .75x5= 3.75 You would need 3.75 ml

A milligram is a weight.



A milliliter (ml) or cubic centimeter (cc) is a volume or a liquid measurement



Liquid medications combine active medications measure in weight mixed in an amount of liquid



Oxycodone Hydrochloride 100mg/5ml
There are 100mg of the medication in 5ml of the liquid

Practice Questions:

1. The health care provider orders Ibuprofen 600 mg PO BID. You have 200 mg/tablet of ibuprofen on hand. How many tablets should be given to the patient at one time?

D (Dose or need) =

S (Strength or have) =

Q (Quantity) =

$$\frac{\text{mg}}{\text{mg}} \times \text{tablet} = \text{tablets}$$

2. Atenolol 50 mg/capsule are supplied. The Health care provider orders 100 mg. How many capsules should be given to the patient

D (Dose or need) =

S (Strength or have) =

Q (Quantity) =

$$\frac{\text{mg}}{\text{mg}} \times \text{capsule} = \text{capsules}$$

3. The order says "Give erythromycin suspension 600 mg PO q 6h". The supply on hand is erythromycin 400 mg/5 ml. How many milliliters of medication should be given to the patient?

D (Dose or need) =

S (Strength or have) =

Q (Quantity) =

$$\frac{\text{mg}}{\text{mg}} \times \text{ml} = \text{ml}$$

Now try some on your own. You may need a separate piece of paper.

4. The order says "Give Tylenol 650 mg PRN q4h". The supply on hand is Tylenol 325 mg/tablet. How many tablets will you give?
5. Sertraline 50 mg/tablet are supplied. The tablets are scored. The Health Care Provider orders state "Take 75mg PO in AM". How many tablets will you give?
6. **Medication:** Chlorthimeton 2 mg/5cc.
Order: "Give Chlorthimeton 4 mg prn hay fever symptoms"
How many cc's will you give?
7. **Medication:** Amoxicillin 125 mg/tablet
Order: Amoxicillin 250mg po q 8h
How many tablets will you give?
8. **Medication:** Zofran 4 mg/tsp
Order: Zofran 8 mg po tid
How many teaspoons will you give?
How many cc's will you give?
9. **Medication:** Feldene 10 mg/capsule
Order: Give 40 mg Feldene tid before meals
What is the abbreviation for "before meals?"
How many Feldene capsules should be given before each meal?
How many Feldene capsules would be given each day?