Compute the amount of medication you will give to administer one dose of the following orders. Assume all tablets are scored, when necessary.

1. Order: Tylenol 325 mg p.o. q.6h p.r.n. for temperature of 101°F or above  
Supply: Bottle containing 50 tablets of Tylenol 325 mg per tablet  
Give: __________ tablet(s)

2. Decide which supply you would select and enter the number of tablets you would give.  
Order: codeine 15 mg p.o. q.4h p.r.n., pain  
Supply: 15 mg, 30 mg, and 60 mg tablets  
Give: Select __________ mg tablets, and give __________ tablet(s).

3. Order: allopurinol 0.2 g p.o. daily  
Supply: Bottle containing 200 tablets Zyloprim (allopurinol) 100 mg per tablet  
Give: __________ tablet(s)

4. Decide which supply you would select and enter the number of tablets you would give.  
Order: codeine 30 mg p.o. q.4h p.r.n., pain  
Supply: 15 mg, 30 mg, and 60 mg tablets  
Give: Select __________ mg tablets, and give __________ tablet(s).

5. Order: Biaxin 100 mg p.o. q.12h  
Supply: 100 mL of reconstituted Biaxin, 125 mg per 5 mL  
Give: __________ mL

Compute the amount of medication that will be given to administer one dose of the following medication orders. Round all parenteral administration orders that are over 1 mL to one decimal place. Round all parenteral administration orders under 1 mL to two decimal places. Do not include zeros at the end of decimal numbers.

6. Order: penicillin G procaine 1,200,000 units IM  
Supply: penicillin G procaine 600,000 units per mL  
Give: __________ mL

7. Order: Demerol 75 mg IM q.4h p.r.n., pain  
Supply: Demerol 50 mg/mL  
Give: __________ mL

8. Order: Valium 3 mg IM q.6h p.r.n., pain  
Supply: Valium 10 mg per 2 mL  
Give: __________ mL
9. 
Ordered: Heparin 5,000 units subcut b.i.d
Supply: Multidose vial of 4 mL of heparin sodium injection 10,000 units/mL
Give: _________ mL

10. How many doses of vistaril 25 mg IM are available in a 10 mL multidose vial of vistaril 50 mg/mL?

11. A 6-year-old child weighing 25 kg has a staph infection and the provider has ordered penicillin. The recommended dose of penicillin for children is 25 to 50 mg/kg/day p.o. in equally divided doses administered q.6h.

What is the recommended range of milligrams of medication for this child per day?
minimum __________ mg maximum ____________ mg

A child who weighs 15 kilograms is to be given amoxicillin. The recommended dosage of amoxicillin for children is 20 to 40 mg/kg/day p.o. in equally divided doses administered q.8h.

12. The pediatrician has ordered amoxicillin 125 mg p.o. q.8h.
The available supply of amoxicillin is 125 mg per 5 mL.
Is the order within the recommended range for this medication? (yes/no) _________
If so, how many mL of amoxicillin should be given per q.8h administration? _________ mL

The following IV orders will be regulated by electronic infusion devices. Calculate the flow rates of the IV fluids in mL/h.

13. 1,200 mL D10W IV to infuse in 10 hours by infusion pump. Flow rate: __________ mL/h

The following IV orders will be regulated manually. Calculate the flow rate of the IV fluid in gtt/min.

14. Calculate the IV flow rate for 500 mL D5/4 NS to infuse over 4 hours. The IV is to be manually regulated. The drop factor is 15 gtt/min.
Flow rate: __________ gtt/min

15. Calculate the IV flow rate for 1 L LR to infuse over 8 hours. The IV is to be manually regulated. The drop factor is 10 gtt/min.
Flow rate: __________ gtt/min

16. 50 mL NS with antibiotic IV to infuse in 20 minutes.
The drop factor is 20 gtt/mL. Flow rate: __________ gtt/min

The following IV orders will be regulated by electronic infusion devices. Calculate the flow rates of the IV fluids in mL/h.

17. 30 mL D5W with antibiotic IV to infuse in 20 minutes by infusion pump. Flow rate: __________ mL/h
The following questions refer to your patient who is on IV heparin therapy according to the “Standard Weight-Based Heparin Protocol” noted below. The patient weighs 144 pounds. On admission, the patient’s APTT is 30 seconds. You initiate IV heparin therapy at 1130 on 06/06/XX. Record your answers in the spaces below unless provided with the “Standard Weight Based Heparin Protocol Worksheet” by your instructor.

### Standard Weight-Based Heparin Protocol

For all patients on heparin drips:

1. Weight in KILOGRAMS required for order to be processed: _____ kg.
2. Heparin 25,000 units in 250 mL of 1/2 NS. Boluses to be given as 1,000 units/mL.
3. APTT q.6h or 6 hours after rate change; daily after two consecutive therapeutic APTTs.
4. CBC initially and repeat every ___ day(s).
5. Obtain APTT and PT/INR on day one prior to initiation of therapy.
6. Guaiac stool initially, then every ___ day(s) until heparin discontinued. Notify if positive.
7. Neuro checks every ____ hours while on heparin. Notify physician of any changes.
8. D/C APTT and CBC once heparin drip is discontinued unless otherwise ordered.
10. Bolus with 80 units/kg. Start drip at 18 units/kg/h.
11. If APTT is < 35 secs: Rebolus with 80 units/kg and increase rate by 4 units/kg/h.
12. If APTT is 36–44 secs: Rebolus with 40 units/kg and increase rate by 2 units/kg/h.
13. If APTT is 45–75 secs: Continue current rate.
14. If APTT is 76–90 secs: Decrease rate by 2 units/kg/h.
15. If APTT is > 90 secs: Hold heparin for 1 hour and decrease rate by 3 units/kg/h.

18. Calculate the dosage of heparin that should be administered for the bolus for this patient.

    ________ units

What does the protocol indicate as the required solution concentration (supply dosage) of heparin to use for the bolus?

    ________ units/mL

Calculate the dose volume of heparin that should be administered for the bolus for this patient.

    ________ mL

19. Give Regular insulin by continuous I.V. infusion at 20 units/hr. The solution is 250 mL NS with 100 units of Regular insulin. What rate on the infusion pump will deliver the correct dose?
**Answer Key**

1. 1

2. Select a 15 mg tablet, and give one tablet.

3. 2

4. Select a 30 mg tablet, and give one tablet.

5. 4

6. 2

7. 1.5

8. 0.6

9. 0.5

10. 20 doses are available

11. 25 mg/kg/day × 25 kg = 625 mg/day minimum

   50 mg/kg/day × 25 kg = 1,250 mg/day maximum

12. Yes, 125 mg per dose is within the 100 mg to 200 mg per 5 mL dose range.

13. 120

14. 31

15. 21

16. 50

17. 90

18. 5,240 units; 1,000 units/mL; 5.24mL

   a. Convert weight : 144/2.2 = 65.45 kg  round to 65.5kg
   b. Calculate Bolus 65.5x80=5240 units  (80units/kg)
   c. Calculate Volume using supply dosage for bolus1000/5240= 5.24 mL

19. D/H x Q =X

   Desire  20 units/hr  x250  = 50ml/hr
   Have  100units /ml