Practice Math Problems for Advanced Placement Students

Conversions

1. 0.9 g = _____ mg

2. 30 mcg = _____ mg

3. 250 mg = _____ g

4. 0.5 L = _____ mL

5. 1.5 oz. = _____ Tbsp.

6. 154 lbs. = _____ kg.

7. 2 Tbsp. = _____ tsp.

8. 0.2 kg = _____ g

9. gr 1/200 = _____ mg

10. gr v = _____ mg
Complete the following word problems.

11. The physician has ordered 1 g. of Ancef. You have 250 mg tablets on hand. How many tablets do you give?

12. The order is 0.5 g of Chloromyedin. On hand are 250 mg capsules. How many capsules do you give?

13. The doctor instructed a patient to take 2 Tbsp. of cough syrup every 12 hours. The patient only has teaspoons available to measure with. How many teaspoons should the patient take with each dose?

14. The order is for Amoxicillin 80 mg IM. The vial of the medication is labeled 100 mg/mL. How many mL will you give?
15. You are ordered to give a patient 250 mg Keflin. The bottle says to add 9.5 mL of sterile water to the vial to yield 0.5 g/mL. How many mL’s will you administer?

16. The order is for 100,000 units penicillin. The penicillin on hand is labeled 250,000 units/mL. How much of the drug will you administer?

17. The order is for Aspirin 162 mg for a temperature greater than 102 degrees F. The medication is available in 81 mg tablets. How many tablets should be administered?

18. The order is for aspirin 650 mg every 6 hours for pain. It is available as 325 mg tablets. How many tablets would be given per dose? How many tablets would be taken per day?

19. You are preparing an injection of morphine. The order reads 15 mg IM. The stock morphine is 48 mg/2 mL. How many mL’s of morphine will you administer?
20. An injection of 4 mg of Valium has been prescribed for a patient suffering from muscle spasms. An ampule of Valium labeled 5 mg/mL is on hand. How many mL should be injected?

21. If a patient is to take 1 ½ oz. of milk of magnesia, how many Tbsp should the patient take?

22. A physician prescribes potassium chloride 10 mEq diluted in 1 glass of juice daily. Potassium chloride 20 mEq per 15 mL is available in a 500 mL bottle. How many mL per dose of potassium chloride should be dissolved in the juice?

23. The physician ordered Synthroid (sodium levothyroxine) 25 mcg every morning. Available are 0.05 mg tablets. How many tablets will you give?
Complete the IV calculations.

24. Ampicillin 2 mL added to 50 mL normal saline over 10 minutes is prescribed for a patient suffering from an upper respiratory infection. Calculate the rate of flow if the administration set reads 10 gtt/mL.

25. The physician orders 350 mg of aminophylline in 150 mL of D5W to be administered over 1 hour. Drop factor 15 gtts/mL. Calculate the gtts/min.

26. Set your IV to administer 100 mL of medication in 40 min. with an administration set that delivers 15 gtt/mL.

27. An IV of 1200 mL is ordered to run for 16 hours. Drop factor 15 gtt/mL. Calculate the gtts/min.

28. What will the drip rate be to infuse 200 mL of D5W over 2 hours with microdrop tubing?
29. Infuse 3000 mL of IV fluid over the next 24 hours with IV tubing that delivers 15 gtt/mL. Calculate the appropriate drip rate.

Pediatric Math

30. How many kg is 16.4 pounds?

Determine the safe dose range for each child in questions 31 – 32

31. The child is to receive Cipro which has a dose range of 20 – 30 mg/kg/24 hours. The child weighs 26.3 kg.

32. The child receives Erythromycin, which has a dose range of 30 – 50 mg/kg/24 hours. The child weighs 16.3 kg.
Questions 33 – 35 refer to the following situation.
Your patient weighs 47.8 pounds. The order is for Ampicillin 400 mg IV every 6
hours. The dose range for Ampicillin is 50 – 100 mg/kg/24 hours. You have on
hand Ampicillin 500 mg in 5 mL.

33. How many kilograms does your patient weigh?

34. What is the safe dose range of Ampicillin for this patient? Round off to the
   nearest whole number.

35. How much Ampicillin will you draw up to administer?