Math Review Worksheet

Conversions

100 mg = _____ g

0.1 g = _____ mg

1 oz = _____ mL

500 mg = _____ g

12 kg = _____ lb

1 L = _____ mL

300 mcg = _____ mg

6 oz = _____ mL

0.6 mg = _____ mcg

10 oz = _____ mL

600 mg = _____ g

0.015 g = _____ mg

12 tsp = _____ mL

10 mcg = _____ mg

90 mL = _____ tbs

2 kg = _____ lb

1,500 mcg = _____ g

2,100 g = _____ kg

5,000 g = _____ mcg

8 tsp = _____ mL

30 kg = _____ lb

250 mcg = _____ mg

102 F = _____ C

8.4 lb = _____ kg

10 mg = _____ mcg

0.2 g = _____ mg

60 mL = _____ oz

0.001 mg = _____ mcg

38.7 C = _____ F

150 lb = _____ kg

9 tsp = _____ tbs

Story Problems

1. A health care provider (HCP) orders carbamazepine (Tegretol) 0.2 g tabs orally TID for a client with an onset of new seizures.
   Available from pharmacy: carbamazepine (Tegretol) 100 mg tabs
   A nurse will administer how many **tablets** per dose? _____

   How many milligrams will the client receive in 24 hours? _____

2. A health care provider (HCP) orders hydrochlorothiazide 12.5 mg orally TID
   Available from pharmacy: hydrochlorothiazide 25 mg scored tablets
   A nurse will administer how many **tablets** per dose? _____

   How many milligrams will the client receive in 24 hours? _____

3. A health care provider (HCP) orders digoxin (Lanoxin) 375 mcg orally once a day.
   Available from pharmacy: digoxin (Lanoxin) 0.25 mg scored tablets.
   A nurse will administer how many **tablets** per dose? _____

4. A health care provider orders linezolid (Zyvox) 0.6 g orally q12h
   Available from pharmacy: linezolid (Zyvox) oral suspension 100 mg per 5 mL
   A nurse will administer how many **milliliters** per dose? _____ _____

   If the container holds 600 mL, how many doses are in the bottle? _____

5. A health care provider orders valproic acid (Depakene) 150 mg orally BID
   Available from pharmacy: valproic acid (Depakene) oral suspension 250 mg per 5 mL
   A nurse will administer how many **milliliters** per dose? _____

   If the container holds 180 mL, how many doses are in the bottle?

6. A health care provider orders ketorolac (Toradol) 25 mg IM q6h prn for severe pain
   Available from pharmacy: ketorolac 15 mg/mL
   A nurse will administer how many **milliliters** per dose? _____

7. A healthcare provider orders ondansetron (Zofran) 3 mg slow IV push X 1 dose stat.
   Available from pharmacy: ondansetron (Zofran) 4 mg/2 mL single dose vial
   A nurse will administer how many **milliliters** of ondansetron per dose? ____ _____

8. A health care provider orders a client with psoriasis hydrocortisone cream 2%
   (2 g/100 mL) topical ointment. The client is to apply 100 mg (1 applicator full) to the right elbow BID and cover with an occlusive dressing.
   How many **milliliters** does the client administer per dose? _____

9. A health care provider orders heparin 6,000 units subcut q12h. Available from pharmacy: heparin 10,000 units/mL vial
   A nurse will administer how many **milliliters** per dose? _____

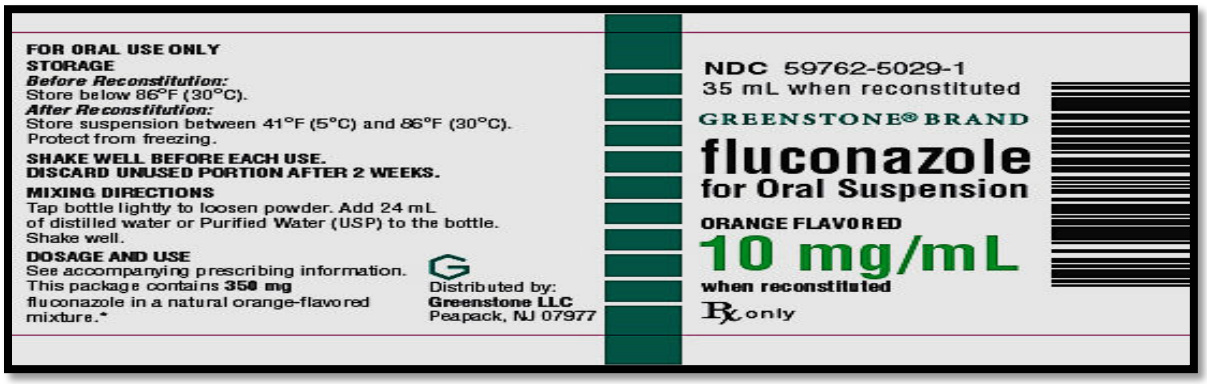
10. A health care provider orders enoxaparin sodium (Lovenox) 65 mg subcut q12h
    Available from pharmacy: enoxaparin sodium (Lovenox) 40 mg/0.4 mL syringe
    A nurse will administer how many **milliliters** per dose? _____ _____

11. A health care provider orders Novolin R (regular U-100 insulin) 21 units with Novolin N (NPH U-100) 15 units subcut stat.
    A nurse will administer **how many total units** of insulin? _____

12. A health care provider orders Humulin R (regular U-100 insulin) 16 units with Humulin N (NPH U-100 insulin) 42 units subcut stat
    A nurse will administer **how many total units** of insulin? _____ _____

13. A healthcare provider orders methylprednisolone sodium succinate (Solu-Medrol) 175 mg slow IV push daily. The pharmacy sends a 500 mg vial of powdered medication for reconstitution with the following mixing directions: Reconstitute with 8 mL of Bacteriostatic Water for injection with Benzyl Alcohol. Mix well. The resulting concentration is 500 mg per 8 mL.
    A nurse will administer how many **milliliters** per dose? _____ _____

14. Read the label below and use it to answer the following question:
A prescriber orders a client with pneumonia to receive fluconazole 50 mg orally BID. The pharmacy supplies fluconazole suspension. See Label Below:



How many **milliliters** of diluent should be added? _____
After reconstitution, how many **milligrams** are in one milliliter? _____
How many **milliliters** will a nurse administer per dose? _____

How many **milligrams** will the client receive in 24 hours? _____

If the bottle contains 35 mL, how many **total doses** are available?

15. A diabetic client is to receive mealtime coverage for carbohydrate intake with Regular insulin subcutaneously. The client's insulin to carbohydrate ratio is 1:12. The client consumed 72 grams of carbohydrates at their meal.
How many **units of regular insulin** should a nurse administer? _____

16. A type I diabetic client has the following insulin orders:
    Check the client's capillary blood glucose before meals and cover with Humulin R per sliding scale orders, this dose is in addition to the regularly scheduled dose of morning insulin.

    Give Humulin N (NPH U-100) 25 units and Humulin R (regular U-100) 6 units subcut with breakfast at 0800.

Sliding Scale Coverage	
0 - 150	Give 0 units
151 - 175	Give 2 units
176 - 200	Give 4 units
201 - 225	Give 6 units
226 - 250	Give 8 units
> 250	Call Prescriber

    The RN noted that the client's AM glucose was 202 at 0745 hrs

    How many **units of regular insulin** should be given? _____

    How much **total insulin** should be given? _____

17. A health care provider orders 1000 mL of 5% Dextrose in Water (D5W) to infuse over 8 hours. A nurse will set the IV pump for how many **milliliters per hour**? _____

18. A health care provider orders a client to receive 1500 mL of Lactated Ringers Solutions (LR) over 8 hours. How many **milliliters per hour** should the IV pump be programmed by a nurse? ____ ____

19. An IV is infusing a 66 ml/hr. A nurse notes that there are 429 ml left in the IV and the time is 0915 hours. At **what time** in hours and minutes (use military time) will the infusion be complete? _____

20. A health care provider orders piperacillin and tazobactam (Zosyn) 1.3 g in 100 mL of 5% Dextrose in Water (D5W) IVPB to infuse in 30 minutes.
    A nurse will set the IV pump for how many **milliliters per hour**? _____

21. A health care provider orders 50 mL of an IVPB antibiotic solution to infuse in 30 minutes.
    A nurse will set the IV for how many **milliliters per hour**? ___ _____

22. A health care provider orders 5% Dextrose in Water (D5W) 1000 mL IV to infuse in 12 hours. Drop factor of the tubing is 20 gtts/mL. How many **drops per minute** will a nurse set the infusion? _____

23. A health care provider orders a client to receive 500 mL of blood plasma over 4 hours. Drop factor of the tubing is 15 gtts/mL.
    How many **drops per minute** will a nurse set the infusion? _____

24. A health care provider orders ampicillin 500 mg dissolved in 100 mL of 5% Dextrose in Water (D5W) to infuse in 1 hour via IVPB. Drop factor of the tubing is 10 gtts/mL
    Calculate the **milliliters per hour**. _____
    Calculate the **drops per minute**. _____ _____

25. A health care provider orders a client to receive 500 mL of 5% Dextrose and 0.45% Sodium Chloride (D5&1/2NS) to infuse over 6 hours. Drop factor of the tubing is 20 gtt/mL
    Calculate the **milliliters per hour**. _____
    Calculate **drops per minute**. _____

26. A health care provider orders a client to receive 0.9% Sodium Chloride (NS) 500 mL mixed with heparin 20,000 units to infuse at 1,400 units/hr
    A nurse will set the IV pump for how many **milliliters per hour**? _____ ____

27. A health care provider orders a client to receive regular insulin to infuse at 3 units/hr
    The insulin comes from pharmacy in a concentration of 100 units of regular insulin in 200 mL of 0.9% Sodium Chloride (NS).
    A nurse will set the IV pump at how many **milliliters per hour**? ____ _____

28. A health care provider orders potassium chloride 40 mEq in 1000 mL of D5W to infuse at 2 mEq/hr. A nurse will program the IV pump for how many **milliliters per hour**? ____

29. A health care provider orders lidocaine 2 g IV in 500 mL of D5W to infuse at 2 mg/min
    Calculate the **milliliters per hour** to set the IV pump. _____ _____

30. A health care provider orders nitroglycerin 125 mg IV in 500 mL of D5W to infuse at 42 mcg/min for a client having chest pain.
    A nurse will set the IV pump to infuse at how many **millimeters per hour**? ___

31. A health care provider orders oxytocin (Pitocin) 15 units IV in 500 mL of lactated ringers solution (LR) to infuse at 1 milliunit/min.
    A nurse will set the IV pump to infuse at how many **milliliters per hour?** ___ ___

32. tirofiban (Aggrastat) is ordered to infuse at 0.1 mcg/kg/min for a patient weighing 136 lbs. A premixed IV bag that contains 12.5 mg in 250 mL NS is on hand.
How many **milliliters per hour** will a nurse set the pump? _____

33. A health care provider orders dicloxacillin sodium 125 mg orally q6hr for a child who weighs 62 lb.
The recommended dosage of dicloxacillin sodium for children weighing less than 40 kg is 12.5 to 25 mg/kg/day po in equally divided doses q6hr for moderate to severe infections.
Child's weight in kg: ____ _____
Is the dosage ordered in range: **ANSWER EITHER** yes or no ____ _____
Rationale:

34. A health care provider orders kanamycin sulfate (Kantrex) 34 mg IM q8hr for an infant who weighs 7 lb 3 oz.
The recommended dosage is 15 mg/kg/day in 2 or 3 equal doses
Infant's weight in kg: _____ _____
Is the dosage ordered in range: **ANSWER EITHER** yes or no _ _____
Rationale:

35. A health care provider orders glycopyrrolste (Robinul) 50.8 mcg IM 60 minutes before surgery for a child who weighs 28 lb.
Recommended dosage is 4 mcg/kg 30 to 60 minutes before surgery
Child's weight in kg: ___ _____
Is the dosage order in range: **ANSWER EITHER** yes or no ____ _____
Rationale: