Math 114: Review for Midterm Exam

Unless the question specifies a particular rounding instruction, round all answers to the nearest tenth.

1. What is 85% of 250?

2. 52 is 80% of what number?

3. 80 is what percent of 120?

4. Suppose your annual salary in 2012 was $32,500. After a raise, your new annual salary in 2013 became $35,800. What was the percent increase of your raise? Round your answer off to the nearest tenth of a percent.

5. $2500 is borrowed for a period of 7 years with an annual interest rate of 3.2%. What is the total due at the end of the 7 years? Round to the nearest cent if necessary.

6. Convert 0425 hours to 12-hour time.

7. Convert 3:18 p.m. to military time.

8. If the order is for 15 milliliters of medicine, how many teaspoons will you administer to the patient?

9. 98.6 inches is how many centimeters?

10. Convert 42.3 g to mg.

11. How many liters is equivalent to 1200 mL?

12. How many tablespoons is equivalent to 18 teaspoons?.

13. Convert 56 pounds to kilograms.

14. In 2006, the Mayo Clinic performed 237 kidney transplants. Approximately 78% of these transplants were from living donors. How many of the kidney transplants were from living donors? (*Source*: www.mayoclinic.org)

15. A microhematocrit measures the percent of RBC in the blood. To perform a microhematocrit, two tubes are filled with blood and centrifuged to allow the RBC to settle to the bottom of the tube. After the percent of each tube is calculated, the two readings are averaged to obtain the hct reading. If the tubes measure 37% and 40%, what is the hct?

16. The online store Technika charges $52 each for clinical refractometers. Technika will give a 10% discount if you buy 10 or more. What will be the total price before tax if you order 12 refractometers? (*Source*: www.technika.com)

17. In 2004, the number of live births in the United States was 4,112,052. Of these, 2,104,661 were male and 2,007,391 were female. Determine the male to female ratio for live births in 2004. (*Source*: National Center for Health Statistics). You do not need to simplify the ratio.

18. Two caplets contains 325 mg of medication. How many caplets contain 975 mg of this same medication?

19. Suppose 300 mL of a saline solution contains 40 g of sodium chloride. What is the percent concentration of this solution?

20. If 120 mL of a rubbing alcohol solution contains 6 mL of pure alcohol, determine the percent concentration of this solution.

21. Convert 42°C to degrees Fahrenheit

22. An OTA is preparing a sitz bath for a client. The bath water should be at a temperature of 104 °F but the bath temperature gauge is in degrees Celsius. What Celsius temperature should be set?

23. A patient's range of motion (ROM) of a knee joint was measured to be 35° three weeks ago. Today, the ROM measurement of the same joint was found to have increased to 45°. Find the percent increase of the range of motion.

24. A 25% solution of serum albumin has been ordered for a patient. If the prescriber wants the patient to have 75 grams of serum albumin, how many milliliters will the patient receive?

25. If the serum albumin was a 25% solution and the order was 150 milliliters, how many grams of serum albumin would the patient receive?

26. A student received scores of 75%, 82%, and 78% on three tests. What is the minimum score she would need on a 4th test so that the average of the four scores would be 80%?
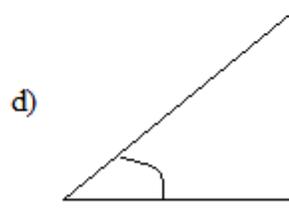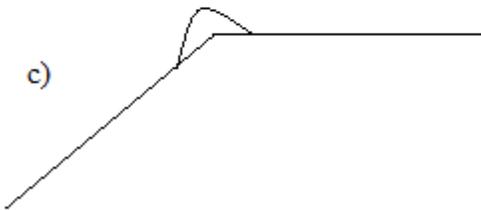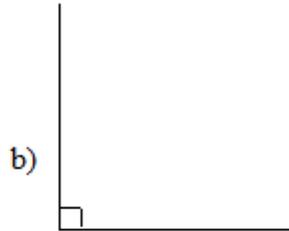
27. Match the most appropriate angle shown below with the following angle measures. Also classify each angle listed as being acute, right, obtuse, or reflex.

120° _____   45° _____   200° _____   90° _____

a)

b)

c)

d)

There may be problems referring to the geometry terms or the other abbreviation facts on the exam, so be sure to know your facts through card number 125. You should also review all of your previous homework problems.

You may use 20 flashcard facts on the exam by filling out the provided table. **This table will have to be turned in with your exam**.

MATH 114 Midterm Review Answer Key

1) 212.5
2) 65
3) 66.7%
4) 10.2% increase
5) $3060
6) 4:25 a.m.
7) 1518 hours
8) 3 t
9) 250.4 cm
10) 42,300 mg
11) 1.2 liters
12) 6 T
13) 25.5 kg
14) 185 living donor transplants
15) 38.5%
16) $561.60
17) 2,104,661:2,007,391
18) 3 caplets
19) 13.3%
20) 5%
21) $107.6°F$
22) $40°C$
23) 28.6% increase
24) 300 mL
25) 37.5 g
26) 85%
27) $120°$ a) obtuse
    $45°$ d) acute
    $200°$ c) reflex
    $90°$ b) right