Mathcounts / AMC 8 Beginner
Homework 2

Name _____

1. A dollar was changed into 16 coins consisting of just nickels and dimes. How many nickels were in the change?

2. Peter has one of each of the following coins in his pocket: a penny, a nickel, a dime, a quarter, and a half-dollar. Four of these coins are taken out of the pocket and the sum of their values is calculated. How many different sums are possible?

3. A purse contains 4 pennies, 2 nickels, 1 dime, and 1 quarter. Different values can be obtained by using one or more coins in the purse. How many different values can be obtained?

4. Five disks, numbered 1, 2, 4, 8, and 16, are placed in a bag. Three disks are withdrawn from the bag, the sum of their numbers is recorded, and the three disks are then returned to the bag. Suppose this process is repeated indefinitely. What is the largest number of different sums that can be recorded?

5. A shopkeeper sells house numbers. She has a large supply of the numerals 4, 7, and 8, but no other numerals. How many different three-digit house numbers could be made using only the numerals in her supply?

6. A restaurant has a total of 30 tables which are of two types. The first type seats two people at each table; the second type seats five people at each table. A total of 81 people are seated when all seats are occupied. How many tables for two are there?

7. In a math contest of 10 problems, 5 point was given for each correct answer and 2 points was deducted for each incorrect answer. If Nancy answered all 10 problems and scored 29 point, how many correct answers did she have?

8. Barbara has 20 coins consisting of nickels and dimes. If the nickels were dimes and dimes were nickels, she would have 30 cents more than she has now. How many dimes did she have to begin with?

9. Suppose two days ago was Sunday. What day of he week will 365 days from today then be?

10. $1200 is divided among four brothers so that each gets $100 more than the brother who is his next younger brother. How much does the youngest brother get?

11. Amy can mow 600 square yards of grass in 1.5 hours. At this rate, how many minutes would it take her to mow 600 square feet?

12. The average of five weights is 13 grams. This set of five weights is then increased by another weight 0f 7 grams. What is the average of the six weights?

13. A man drives from his home at 30 miles per hour to the shopping center which is 20 miles from his home. On the return trip he encounters heavy traffic and averages 12 miles per hour. How much time (in minutes) does the man take in driving to and from the shopping center?

14. A jar filled with water weighs 10 pounds. When one-half of the water is poured out, the jar and remaining water weighs 5 and 3/4 pounds. How much does the jar weigh?

15. At post office, a person spent a total of $2.00 to get some 29 cents-stamps and some 5 cent-stamps, and received no change. How many 5 cents-stamps did the person buy?