

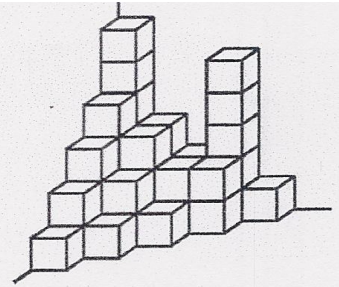
Math Olympiad Beginner

Homework 2

Name _____

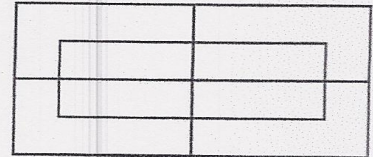
1. Robert and Bob had \$250 altogether. If Bob spent \$35, he would still have \$5 more than Robert. How much money did Robert have?
2. Six trees are equally spaced along one side of a straight road. The distance between the first tree to the fourth is 60 feet. What is the distance in feet between the first and last tree?
- 3.

The structure at the right is made of unit cubes piled on top of each other. Some cubes are not visible. What is the number of cubes in the structure?



- 4.

Different rectangles can be traced using the lines in the figure given at the right. How many different rectangles can be traced?



5. I have a cubic block that is 12 inch x 12 inch x 12 inch. Suppose I painted ONLY on 5 faces of the cube and then cut in smaller cubes of 2 inch in size. Please find how many cubes are painted in one face?
6. A boy has the following seven coins in his pocket: 2 pennies, 2 nickels, 2 dimes, and 1 quarter. He takes out two coins, records the sum of their values, and then puts them back with the other coins. He continues to take out two coins, record the sum of their values, and put them back. How many different sums can he record at most?
7. A total of fifteen pennies are put into four piles so that each pile has a different number of pennies. What is the smallest possible number of pennies that could be in the largest pile?

8. 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?
9. 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?
10. 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?