

Unit 8 Problem Set

3 marks each + 3 marks for proper mathematical form

/15

1. A 500 ml cup is full of orange juice concentrate and water, in which there is 60% concentrate. 200 ml are consumed and the cup is filled up again with water. Determine the new fraction of orange juice concentrate.



2. Len's number is 31. Jim's number is 32. Sam's number is 33. Which number is the largest: Tom's number, Ken's number, Ray's number or Sam's number?



3. A four letter word can be written forward, backward or upside down while remaining the same word. What is the word?

A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z

4. Santa fills the elf-shoes of the good elves with candy and other good things. However, the elf-shoes of the naughty elves generally receive some coal as well. Three of Santa's elves, the triplets, Zeta, Eta and Theta, have been very naughty this year. Santa is giving them a total of ten lumps of coal between them in their elf-shoes. Each of them must get at least one lump of coal.



ZETA



ETA



THETA

In how many different ways can Santa distribute the coal to Zeta, Eta and Theta?