Class 9 Application Problems

Travel/Distance Problems

❖ involve a scenario in which you need to figure out how **fast**, how **far**, or how **long** one or more objects have traveled. These are often called **train problems** because one of the most famous types of distance problems involves finding out when two trains heading toward each other cross paths.

❖ Time * Speed = Distance

❖ Four people are traveling on the same highway. One is driving a car, another is driving a motor bicycle, the third is riding on a nonmotor bike, the fourth is walking. Assume the car catches up the walker at 12 PM, encounters the bike coming from the opposite direction at 14 PM, encounters the motor bicycle from the opposite direction at 16 PM, while motor cycle meets the walker at 17 PM and catches up the bike at 18 PM. When will the bike meet the walker? 13:20

Work/Job Problems

❖ "Work" problems usually involve situations such as **two people working together to paint a house**. You are usually told how long each person takes to paint a similarly-sized house, and you are asked how long it will take the two of them to paint the house when they work together.

❖ Rate * Time = Work

❖ Two factories A, B manufacturing same products have total 1100 workers. Every worker in the two factories can do the same amount of work in the same amount of time. If we move workers from Factory A to Factory B, and move workers from Factory B to Factory A, then the work that normally would have taken Factory A 25 days to complete now takes 36 days to complete. How many workers in Factory A and Factory B respectively? 500/600

Mixing Problems

❖ Mixture word problems are **exercises which involve creating a mixture from two or more different things, and then determining some quantity (such as percentage, price, number of liters, etc) of the resulting mixture**

❖ **A bucket has alcohol 5 liter, and B bucket has water 10 liter. If we take x liter from A bucket and B bucket respectively and dump in the other bucket, and do it again, then the concentrations of alcohol in the two bucket are the same. Please find x. x = 10/3 liter**