

# Computational Methods and Modelling

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Tutorial 6  
Gauss Elimination



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# Exercise 1: Calculate Cord Tensions in a Tandem Team of Parachutists



- ▶ Three parachutists are connected by a weightless cord while free-falling at a velocity of 5 m/s.
- ▶ Calculate the tension in each cord, and the acceleration of the team given the following data

Parachutist	Mass, kg	Drag Coefficient, kg/s
1	70	10
2	60	14
3	40	17

▶ **Hints:**

1. Use free body diagrams to express the problem
2. Express the drag force as  $c_i v$ , where  $c_i$  are the drag coefficients and  $v$  the velocity.