1. We wish to balance a 75 lb weight on one end of a see-saw with a 120 lb weight placed on the other end of the see-saw. If the see-saw has a total length of 15 feet, how far from the 120-lb weight should the fulcrum be placed to achieve balance?

a) Problem Set-up:

b) Identify equations and unknowns and state how you would solve the problem:

c) Solve the problem
2. Two children sit at either end of a 14-foot see-saw that balances. The distance from the first child to the fulcrum is 6 ft. The children together weigh a total of 200 lb. What is the weight of the first child?

a). Problem Set-up:

b) Identify equations and unknowns and state how you would solve the problem:

c) Solve the problem
3. The Acme See-Saw Company wants you to help design an adjustable see-saw. On their see-saw, there are three notches to put a fulcrum in. One notch is in the center of the see-saw, and the other two are one foot to each side. The see-saw should be designed so a 50 lb child and a 75 lb child will be able to be perfectly balanced. If the weight of the see-saw itself can be ignored, how long should the see-saw be?

a) Problem Set-up:

b) Identify equations and unknowns and state how you would solve the problem:

c) Solve the problem