

# Activity 5.1b – Free Body Diagrams Worksheet

## Purpose

Free-body diagrams are diagrams used to show the relative magnitude and direction of all forces acting upon an object in a given situation. A free-body diagram is a special example of a vector diagram.

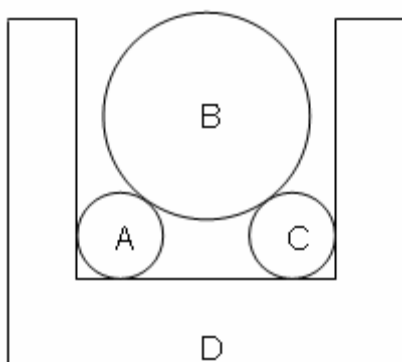
## Equipment

Pencil  
Straight edge

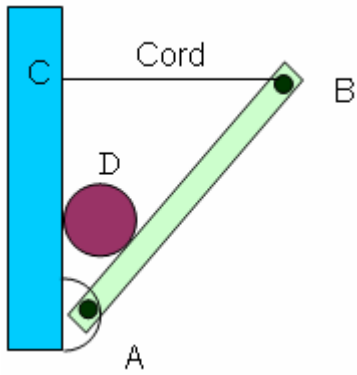
## Procedure

Draw free body diagrams (force diagrams) for each of the following:

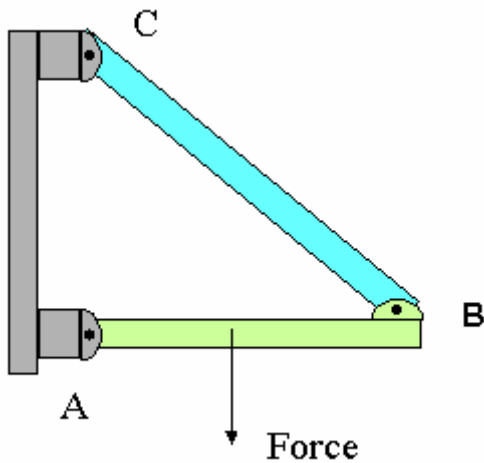
1. Draw free body diagram for items A, B, C, D.



2. Draw free body diagram for member AB and cylinder D.



3. Draw a free body diagram for member AB which is pin connected at A and supported by member BC.



## Conclusion

1. What is the point behind creating a free body diagram of an object?
  
2. Sketch a free body diagram of a person sitting in a car seat. Which force arrows do you think would be the largest? Why?