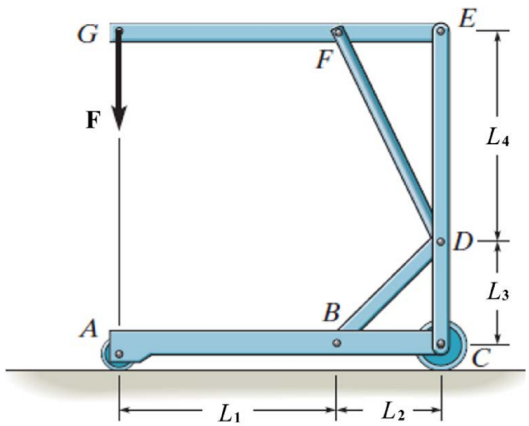
University of Victoria Engineering

ENGR 141 – Engineering Mechanics

Spring 2023
Tutorial No. 7

Version: 1

For the frame shown below.



Let

$F = 5$ kN

$L_1 = 4.5$ m, $L_2 = 2$ m, $L_3 = 1.6$ m, and $L_4 = 2.25$ m

a) Determine the internal forces of members *FD* and *BD* and indicated whether they are in tension or in compression.

b) Determine the horizontal and vertical components of reactions at pin *C*.

Instructions: Two submissions are required.

1) *At the end of the tutorial session, you will hand out a paper copy of your solution to the Teaching Assistant. Make sure that you have a second copy of your solution, so you can complete the final draft. Do not forget to write your names and student numbers in your submission. A student who is absent from the tutorial will not receive any credit for it. A student can join the session remotely (e.g., zoom, WhatsApp, etc.), but you as a team must arrange the communication and let the Teaching Assistant know that a student is working remotely with the team.*

2) *Before the beginning of the next tutorial, this could be anytime during the week, upload a pdf file of your complete solution. Make sure you show all the steps necessary to solve this problem. Upload the pdf file under* ***Tutorial*** *7. Include your names and student numbers. Only one submission per team.*