

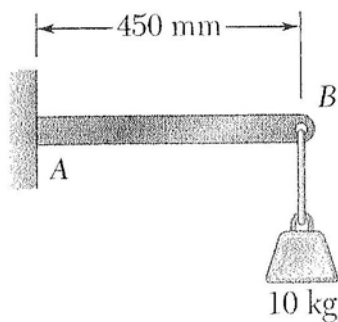
Name (in Arabic) :
 Student No.:
 Instructor :

Q. No.	Marks
1	
2	
3	
Total	

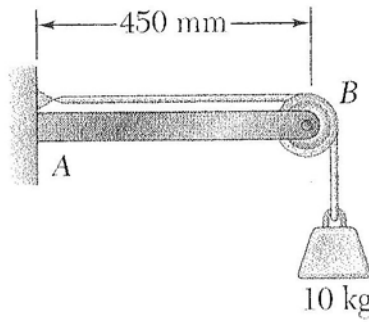
Q # 1 (10 points)

A **10 kg** block is supported in the three different ways as shown in the figure. Radius of the pulley is 100 mm.

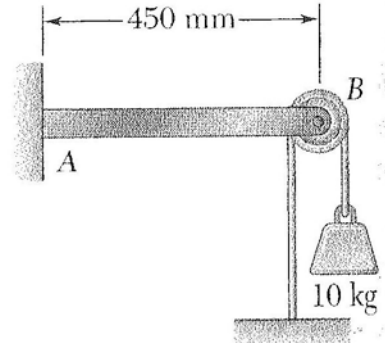
Determine **all reactions at A** in each case.



(a)



(b)



(c)

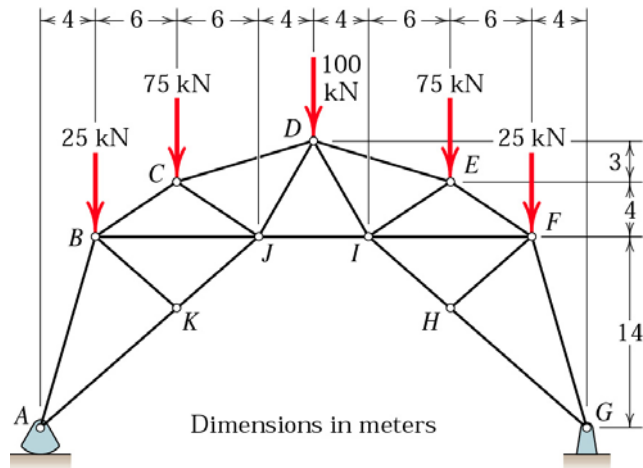
Solution:

Q # 2 (10 points)

For the truss shown in the figure:

- Identify all **zero-force members**
- Compute the force in member **CD** using the method of section
- Compute the force in members **BC** and **BJ** using the method of joints

(specify whether member is in
Tension or *Compression*)

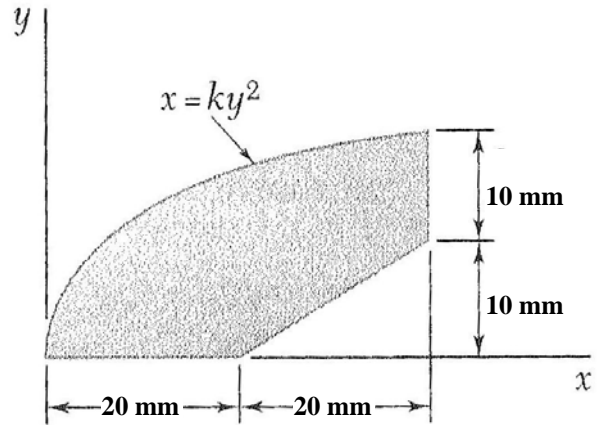


Solution:

Name (in Arabic):	Student No	Marks:
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Q # 3 (10 points)

For the shaded area as shown in the figure,
Determine the x - and y - coordinates of the centroid.



Solution: