Multiple Choice Questions

1. **Cantilever beam has one end _____ and other end _____.**

   a. hinged, free
   b. fixed, free
   c. fixed, hinged
   d. none of the above

2. Redundant truss is a type of _____

   a. perfect truss
   b. imperfect truss
   c. stable truss
   d. none of the above

3. The maximum and minimum magnitude of resultant forces is 1000 N and 500 N at point. What are the values of two forces acting on it?

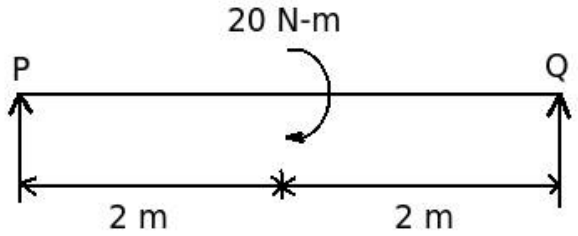
   a. 500 N, 500 N
   b. 450 N, 550 N
   c. 300 N, 700 N
   d. 250 N, 750 N

4. Which of the following statements is false about forces/couple?

   a. Moment of couple is free vector
   b. Resultant and equilibrant are equal in magnitude and direction
   c. Resultant of a couple is always zero
   d. Parallelogram law is to be proved experimentally

   b.

5. What is the reaction acting on point Q, for the simply supported beam shown below?



a. 5 N (↑) **b.** 10 N (↑) **c.** 10 N (↓) **d.** 40 N (↓)

6. Which of the following conditions do not change the effect of couple?

a. Shifting of couple to a new position in its plane
b. Shifting of couple to a parallel plane
c. Rotation of couple in its plane
d. All of the above

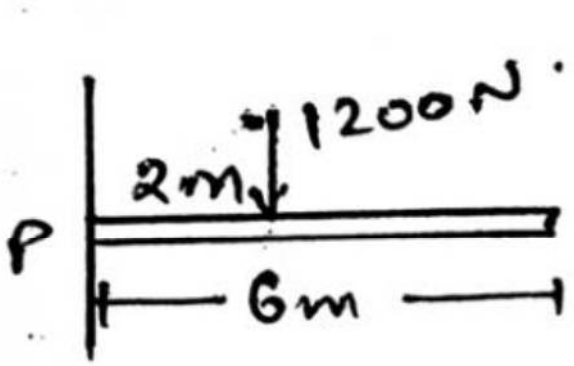
7. A single force and a couple acting in the same plane upon a rigid body

a. balance each other
b. cannot balance each other
c. produce moment of a couple
d. are equivalent

8. The main condition for the rigid body is that the distance between various particles of the body does change.

a) True
b) False

9. The shown here has a mass of 100kg. What is missing here in the diagram?



a) The weight of the body is not shown
b) The moment of the force is not shown
c) The body cant be held like this
d) The body diagonal is not shown

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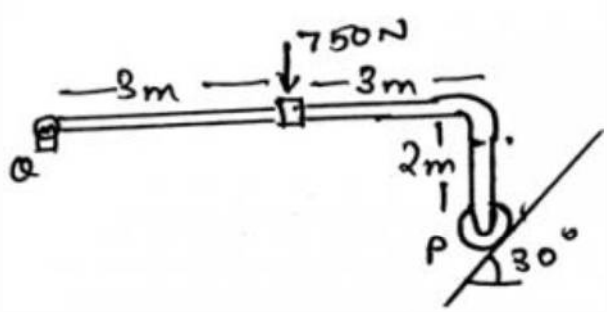
10.Determine the horizontal components of the reaction on the beam caused by the roller at P.



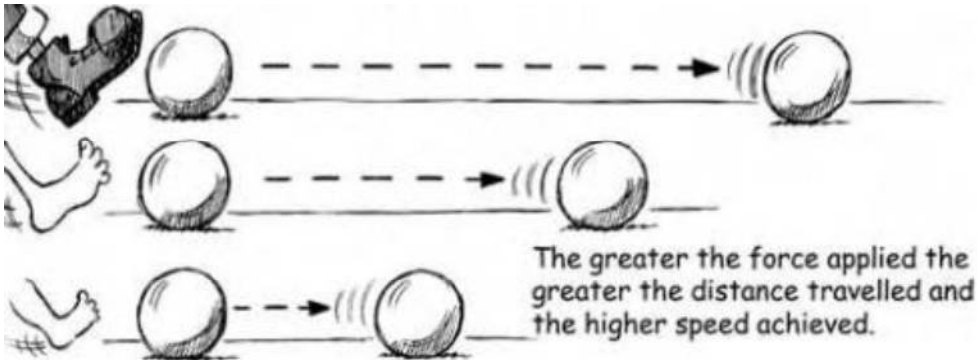
a)536N

b)536cos30N

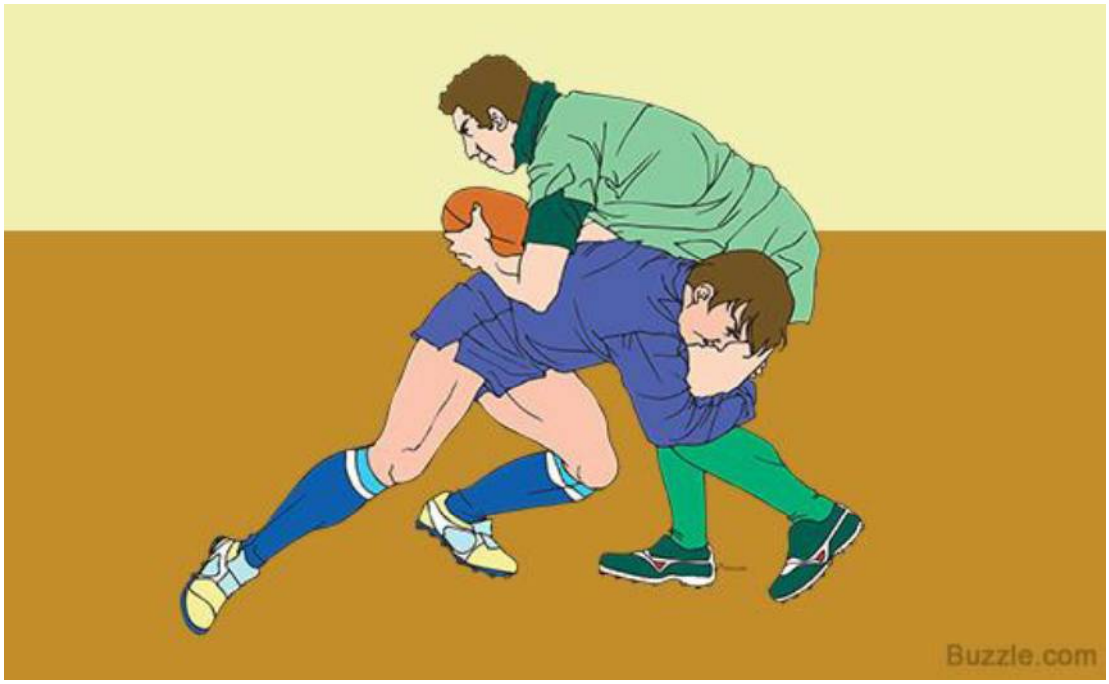
c)536sin30N

d) 536tan30N

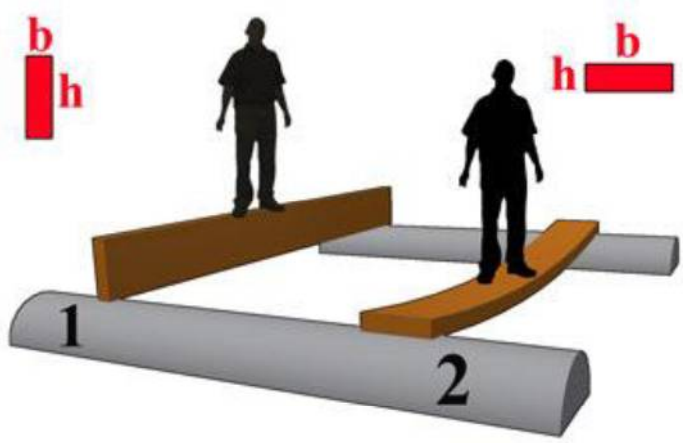
Match the Following

	Newton's Second Law
	Newton's First Law
	Newton's Third Law

Draw free body diagram for the image & explain



Both beams have the same area and even the same shape. Which one is stronger ? Why?



Identify where the block t be placed